HIGHWAYS AGENCY

Safe roads, reliable journeys, informed travellers

Cambridge to Huntingdon improvement scheme A14

Technical review of options

September 2013

An executive agency of the Department for Transport

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25 miles
of improvement

The section of the A14 trunk road between Cambridge and Huntingdon is notorious for congestion and delays. Built more than three decades ago, the road cannot cope with the daily volume of traffic that now uses it, and is in need of improvement.

Plans to upgrade the A14 have existed for some time. But now there is a commitment and a funding solution to get things done – to create a new, high-standard strategic route that unlocks the problems of congestion and delivers economic benefits to the region and beyond.

Extending from Ellington, on the western outskirts of Huntingdon, to Milton junction on the Cambridge Northern Bypass, and including an upgrade to the A1 trunk road as far north as Alconbury, the A14 Cambridge to Huntingdon improvement scheme will become one of the UK's largest road projects and a massive investment in the region by both central and local government.

The scheme, will be complete by the end of the decade and will provide a long-term, sustainable solution that meets the needs of road users, local and regional businesses, and the community for many years to come.

The level of capital investment required to deliver the scheme is up to £1.5bn, which makes it the largest road improvement project in the Government's roads programme. Most of this expenditure is associated with road and bridge construction activities, but there are also planning and design costs to be considered as well as the cost of creating an environmental and landscaping solution that enhances the local area and minimises the impact of the road on its surroundings.

Most of the investment needed for this scheme will come from Central Government. In addition, the local authorities and Greater Cambridge Greater Peterborough Enterprise Partnership (LEP) in the Cambridgeshire and Huntingdon region and surrounding areas have joined forces to raise a further £100m of capital investment. But to make this much needed scheme more affordable, it is proposed that road users should contribute towards some of the cost of delivering these improvements, with the introduction of tolls on part of the scheme.

up to
£1.5bn
of investment

49 million
users per annum

The A14 trunk road between Cambridge and Huntingdon is unable to cope with existing traffic flows. Further growth in traffic volumes is predicted as a result of local and regional social, demographic and economic factors, as well as an increase in road-freight traffic and growth in local housing and employment. Taken together, it is expected that traffic will grow by around 15 per cent by 2021 and on the busiest sections, traffic is forecast to grow by 58 per cent by 2031 (to 49 million).

Without improvement, congestion on the A14 trunk road will become worse and be a constraint to housing and business growth in the Cambridge and Huntingdon area. Local businesses need access to a large and diverse labour market, requiring many people to commute into, and out of, the area each day. Quality of life for those who live in Cambridge and Huntingdon is reduced by congestion, which causes frustration and delay and results in more road traffic accidents as well as other health problems.

The scheme will accommodate future growth in traffic and separate local and commuter traffic from strategic long-distance flows.

Foreword

The A14 forms part of the trans-European transport network, provides a vital east-west corridor between the Midlands and the Haven Ports, and joins north-south routes via the A1(M) and M11 motorways. It also serves as a local commuter route in the region.

In June 2013, Government announced its commitment to the A14 Cambridge to Huntingdon improvement scheme, which will relieve congestion, unlock local and regional growth, connect people more effectively, improve safety, and leave a legacy of business and community benefits that extends well beyond the highway infrastructure alone.

Businesses, local authorities, and the community in Cambridgeshire will play an important part in the scheme's development. Before the Highways Agency submits a Development Consent Order application to the Planning Inspectorate for consideration, it will consult widely to explore stakeholders' views on the design proposals and the impacts of the scheme on the surrounding area.

This document provides details of the proposed scheme and the work carried out to develop it. Along with a consultation brochure and information provided by the Highways Agency online, it helps you to understanding why, how and when we are planning to develop this scheme, and will help you to respond to this consultation and to the future stages in the consultation that will take place in 2014.

Combating congestion

The A14 Cambridge to Huntingdon improvement scheme will combat traffic congestion on a critical link in the national transport network, making life easier and safer for businesses, hauliers and commuters.

The A14 trunk road is an arterial link in the UK's strategic road network. Extending for 130 miles (210km) from the M1/M6 motorway junction at Rugby to Cambridge and the Haven Ports, it is classified as a link in the Trans-European Transport Network and carries traffic from Britain to, and from, continental Europe.

Up to 85,000 vehicles currently use the A14 between Cambridge and Huntingdon every day, which is significantly above the level of traffic that was expected when the road was built. In addition, up to 26 per cent of this traffic comprises heavy goods vehicles, a proportion well above the national average of 10 per cent.

Traffic congestion is therefore inevitable, particularly on the approaches to roundabout junctions at Brampton Hut and Spittals, on the stretch of road between Fenstanton and Bar Hill, and on the approaches to the junction with the M11 at Girton interchange. The Cambridge Northern Bypass experiences peak-hour junction congestion, with queues often backing up onto the dual carriageway slip roads.

The resulting delays make commuter trips longer and more frustrating, while inconveniencing long-distance strategic users and making freight movements costlier and less predictable. And because the road is, for the most part, a two-lane dual carriageway, it lacks resilience when accidents, breakdowns and roadworks occur.

Traffic demand on the A14 is set to increase as a result of national growth in private car travel, increasing volumes of strategic freight traffic, and localised population growth in Cambridge and Cambridgeshire. Employment opportunities in the Cambridge region have continued to expand and this, in turn, has meant longer daily commutes into, and out of, the area. Pressure on housing and accommodation in the region is severe and there are plans for several large-scale residential developments along the A14 corridor, all of which will introduce further traffic onto the network.

The A14 Cambridge to Huntingdon improvement scheme is being designed to combat congestion and to provide a modern, high-standard strategic route that has the capacity and resilience to cope with the anticipated growth in road traffic. A core objective of the scheme is to separate strategic through-traffic and long-distance commuters from local traffic, providing appropriate standards of road for each group of travellers and establishing a highway network that is safer, more resilient, and more sustainable. Junctions will be designed to provide freer movement of traffic during peak periods and capacity will be built in for anticipated housing developments, in particular that planned at Northstowe. Additional capacity will also be provided on the A1 trunk road in the vicinity of its junction with the A14 in order to ensure improvements on the A14 are not offset by an increase in congestion on the adjacent trunk road.

The A14 Cambridge to Huntingdon improvement scheme provides a comprehensive solution to a long-standing problem on an important link in the strategic road network. It will make journeys easier and less stressful, and will remove unwanted traffic from sections of the A14 around Huntingdon that were never designed to cope with such high levels of flow, resulting in improvements to the environment and to the quality of life for those who live close to the road corridor.

Unlocking growth

The A14 Cambridge to Huntingdon improvement scheme will provide a better, more reliable strategic link that makes the Cambridgeshire sub-region a place in which it is easy to work, live and do business. It will help to unlock the growth potential of local businesses and enable large-scale housing developments to proceed.

The Cambridgeshire sub-region is one of the UK's fastest growing areas, both economically and in population terms. An area known for the success of its advanced, science-based industries and as a centre of innovation and learning, Cambridgeshire is positioned for further growth over the next two decades.

The A14 trunk road is one of the most strategic transport links in this region, but delays and congestion on the A14 between Cambridge and Huntingdon are constraining economic growth and limiting the ability of local employers to attract the best people. This section of the A14 has achieved notoriety as a congestion bottle-neck, which affects the reputation of the sub-region.

Cambridgeshire also suffers from a chronic housing shortage, which has led to soaring house-price inflation and difficulties for first-time buyers. The population of the sub-region is expected to grow by nearly a quarter in the next 20 years, placing still greater strain on the housing market over that period.

The A14 Cambridge to Huntingdon improvement scheme is central to plans for major new residential developments, notably the 10,000-home settlement at Northstowe, which is close to the proposed route at Bar Hill. Without improvement in its transportation links, the sub-region is unable to support such large-scale developments and the A14 scheme provides the key to unlocking the growth potential in the Cambridge and Huntingdon area. The Greater Cambridge Greater Peterborough Enterprise Partnership is spearheading commercial investment in this region and predicts that the sub-region can support an increase of around 22 per cent in jobs by 2031.

The economic benefits of the A14 improvements extend well beyond the Cambridgeshire sub-region and the capacity and resilience of the A14 corridor has an impact on long-distance trade between the Midlands and Northern Europe. The A14 is the gateway to the Haven Ports at Ipswich, Harwich and Felixstowe – which are forecasting a three-fold increase in throughput by 2030 – and provides a strategic east-west link for people and freight movements between the Midlands / North and the South East and Channel Ports. It is inevitable that the return to national economic growth will result in more freight movements and business travel on the strategic road network and, without improvement, the A14 between Cambridge and Huntingdon will suffer increasing levels of congestion and journey-time reliability will worsen for both local and through-traffic.

The A14 Cambridge to Huntingdon improvement scheme unlocks growth in Cambridgeshire and prepares the sub-region for a predicted national increase in road traffic. It will provide employers with access to a more extensive labour market and make the Cambridgeshire sub-region a place where Britain's best and most forward-looking businesses will want to locate to.

The A14 Cambridge to Huntingdon improvement scheme will help to keep heavy, through-traffic away from urban and village roads that were never intended to cope with today's traffic, providing local people with better, safer local access to services and amenities.

The Highways Agency, the Local Enterprise Partnerships, and local authorities in Cambridgeshire are working in partnership to provide a highway solution that addresses both local and strategic transport needs, together with the broader social priorities of the community.

By providing a strategic corridor for high-speed, long-distance, through-traffic, a wider range of options can be developed to meet local travel needs and to create a safer, more sustainable road system that makes journeys between the towns and villages quicker, easier and more enjoyable.

The de-trunking of the existing A14 from Fen Drayton to Brampton Hut provides an important opportunity to re-integrate areas of Huntingdon and its surroundings, which for many years have been separated by a busy, fast moving road. The existing trunk road has limited the opportunity to enhance the townscape and has created a barrier to non-motorised movement.

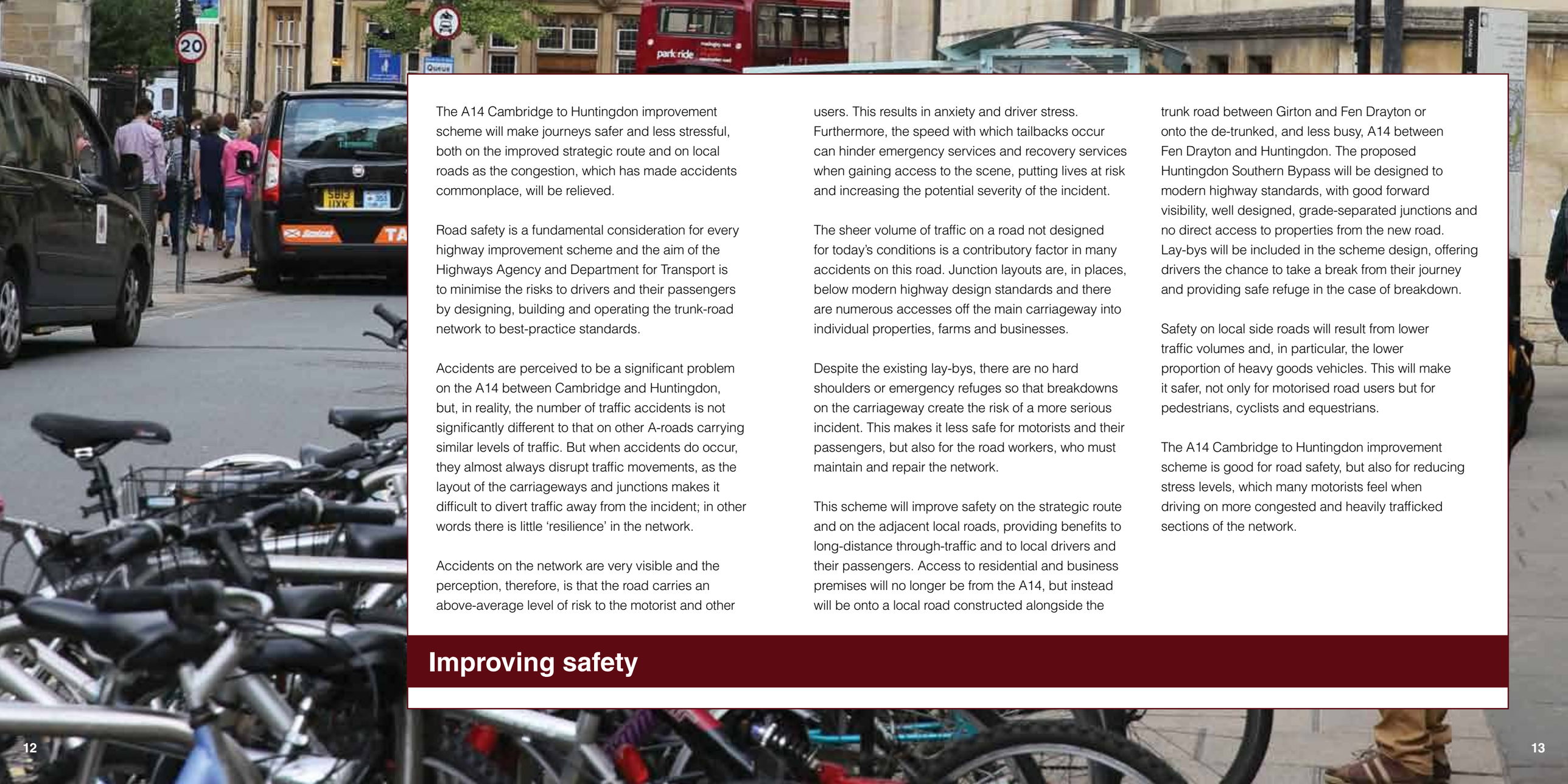
The bridge that carries the A14 over the East Coast Mainline, close to Huntingdon station, would no longer be required under the scheme proposals, and would be removed in its entirety once Huntingdon Southern Bypass is complete. This is an unattractive concrete structure, which diminishes its surroundings and which, as a result of recent essential maintenance work, now imposes a height restriction on vehicles passing beneath it to access the town centre and the railway station. Its removal will eliminate a long-standing divide in the centre of Huntingdon and will enhance the quality of the environment and townscape around an attractive station approach.

Users of public transport will also experience improved travel. Public transport providers need good quality, uncongested routes in order to provide a reliable and cost-effective service. Journeys between Huntingdon and Cambridge will become easier for bus services as well as for school transport.

Rural parts of Cambridgeshire will benefit from the proposed scheme too; the provision of a high-quality strategic route and a good local alternative will reduce much of the 'rat-running' experienced in villages along the route of the A14, which causes congestion and negative social and environmental impacts. Village streets will become safer and quality of life in village communities will improve.

So, in addition to its strategic transportation benefits, the A14 Cambridge to Huntingdon improvement scheme will make it easier to get around along the route of the trunk road and will improve connectivity between Cambridge and Huntingdon. For commuters, this creates greater employment choices and a less stressful trip to work, while, for local residents, it helps to preserve the character of the towns and villages in which they live.

Connecting people



Improving safety

The A14 Cambridge to Huntingdon improvement scheme will make journeys safer and less stressful, both on the improved strategic route and on local roads as the congestion, which has made accidents commonplace, will be relieved.

Road safety is a fundamental consideration for every highway improvement scheme and the aim of the Highways Agency and Department for Transport is to minimise the risks to drivers and their passengers by designing, building and operating the trunk-road network to best-practice standards.

Accidents are perceived to be a significant problem on the A14 between Cambridge and Huntingdon, but, in reality, the number of traffic accidents is not significantly different to that on other A-roads carrying similar levels of traffic. But when accidents do occur, they almost always disrupt traffic movements, as the layout of the carriageways and junctions makes it difficult to divert traffic away from the incident; in other words there is little 'resilience' in the network.

Accidents on the network are very visible and the perception, therefore, is that the road carries an above-average level of risk to the motorist and other users. This results in anxiety and driver stress. Furthermore, the speed with which tailbacks occur can hinder emergency services and recovery services when gaining access to the scene, putting lives at risk and increasing the potential severity of the incident.

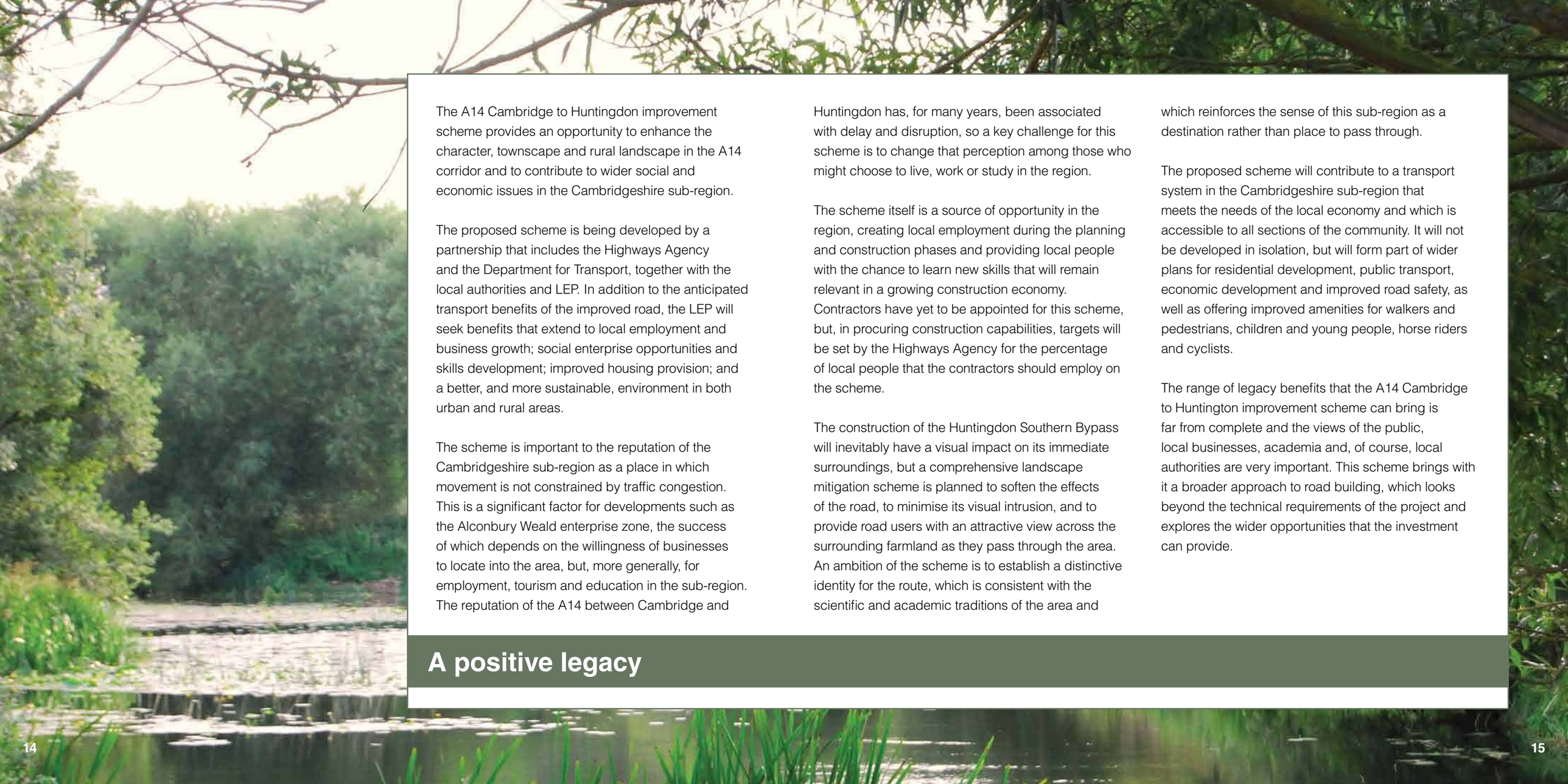
The sheer volume of traffic on a road not designed for today's conditions is a contributory factor in many accidents on this road. Junction layouts are, in places, below modern highway design standards and there are numerous accesses off the main carriageway into individual properties, farms and businesses.

Despite the existing lay-bys, there are no hard shoulders or emergency refuges so that breakdowns on the carriageway create the risk of a more serious incident. This makes it less safe for motorists and their passengers, but also for the road workers, who must maintain and repair the network.

This scheme will improve safety on the strategic route and on the adjacent local roads, providing benefits to long-distance through-traffic and to local drivers and their passengers. Access to residential and business premises will no longer be from the A14, but instead will be onto a local road constructed alongside the trunk road between Girton and Fen Drayton or onto the de-trunked, and less busy, A14 between Fen Drayton and Huntingdon. The proposed Huntingdon Southern Bypass will be designed to modern highway standards, with good forward visibility, well designed, grade-separated junctions and no direct access to properties from the new road. Lay-bys will be included in the scheme design, offering drivers the chance to take a break from their journey and providing safe refuge in the case of breakdown.

Safety on local side roads will result from lower traffic volumes and, in particular, the lower proportion of heavy goods vehicles. This will make it safer, not only for motorised road users but for pedestrians, cyclists and equestrians.

The A14 Cambridge to Huntingdon improvement scheme is good for road safety, but also for reducing stress levels, which many motorists feel when driving on more congested and heavily trafficked sections of the network.



A positive legacy

The A14 Cambridge to Huntingdon improvement scheme provides an opportunity to enhance the character, townscape and rural landscape in the A14 corridor and to contribute to wider social and economic issues in the Cambridgeshire sub-region.

The proposed scheme is being developed by a partnership that includes the Highways Agency and the Department for Transport, together with the local authorities and LEP. In addition to the anticipated transport benefits of the improved road, the LEP will seek benefits that extend to local employment and business growth; social enterprise opportunities and skills development; improved housing provision; and a better, and more sustainable, environment in both urban and rural areas.

The scheme is important to the reputation of the Cambridgeshire sub-region as a place in which movement is not constrained by traffic congestion. This is a significant factor for developments such as the Alconbury Weald enterprise zone, the success of which depends on the willingness of businesses to locate into the area, but, more generally, for employment, tourism and education in the sub-region. The reputation of the A14 between Cambridge and Huntingdon has, for many years, been associated with delay and disruption, so a key challenge for this scheme is to change that perception among those who might choose to live, work or study in the region.

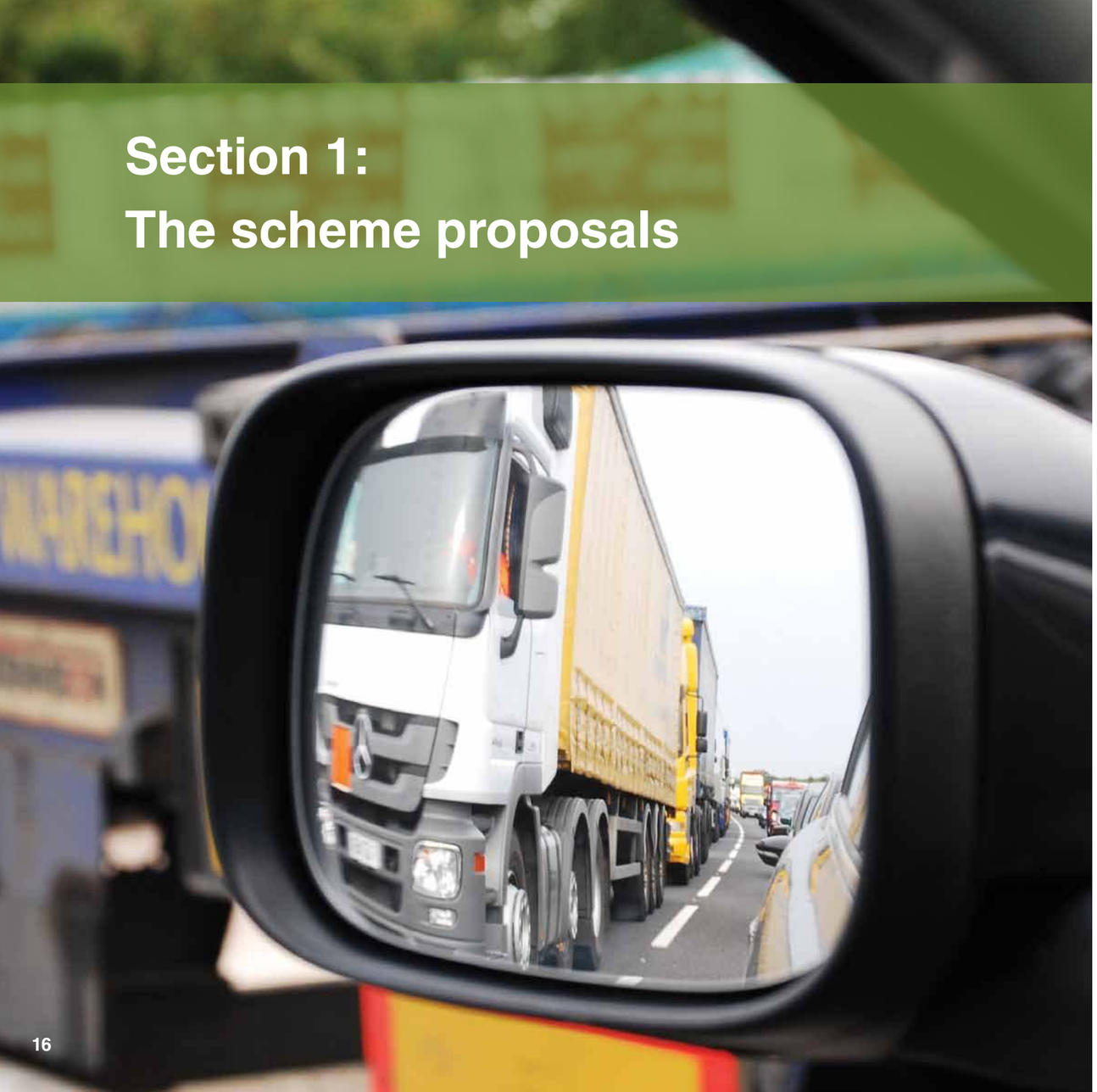
The scheme itself is a source of opportunity in the region, creating local employment during the planning and construction phases and providing local people with the chance to learn new skills that will remain relevant in a growing construction economy. Contractors have yet to be appointed for this scheme, but, in procuring construction capabilities, targets will be set by the Highways Agency for the percentage of local people that the contractors should employ on the scheme.

The construction of the Huntingdon Southern Bypass will inevitably have a visual impact on its immediate surroundings, but a comprehensive landscape mitigation scheme is planned to soften the effects of the road, to minimise its visual intrusion, and to provide road users with an attractive view across the surrounding farmland as they pass through the area. An ambition of the scheme is to establish a distinctive identity for the route, which is consistent with the scientific and academic traditions of the area and which reinforces the sense of this sub-region as a destination rather than place to pass through.

The proposed scheme will contribute to a transport system in the Cambridgeshire sub-region that meets the needs of the local economy and which is accessible to all sections of the community. It will not be developed in isolation, but will form part of wider plans for residential development, public transport, economic development and improved road safety, as well as offering improved amenities for walkers and pedestrians, children and young people, horse riders and cyclists.

The range of legacy benefits that the A14 Cambridge to Huntington improvement scheme can bring is far from complete and the views of the public, local businesses, academia and, of course, local authorities are very important. This scheme brings with it a broader approach to road building, which looks beyond the technical requirements of the project and explores the wider opportunities that the investment can provide.

Section 1:
The scheme proposals



1.1 Proposed route

The A14 Cambridge to Huntingdon improvement scheme involves the improvement and upgrading of a 23-mile length of strategic highway between Cambridge and Huntingdon, the widening of a two-mile stretch of the A1 between Alconbury and Brampton, and the modification and improvement of the associated local-road network within this corridor.

The scheme comprises:

- the new Huntingdon Southern Bypass, which will connect Ellington with Swavesey via a route to the south of Brampton
- widening of the A1 trunk road between Brampton and Alconbury to provide additional lane capacity and to prevent queuing at key junctions
- on-line improvement of the existing A14 trunk road between Swavesey and Girton, together with associated local road improvements and junctions
- improvement of the junction at Girton between the A14 and A428 trunk roads with the M11 motorway and Huntington Road, Cambridge
- improvement of the Cambridge Northern Bypass to tackle queuing at the Histon and Milton junctions and to provide additional lane capacity for through-traffic and commuters

The scheme will also include works associated with the de-trunking and realignment of the existing A14 route between Ellington and Fen Drayton to reduce the impact of this existing road on its surroundings. As part of these works, the A14 road bridge across the East Coast Mainline railway will be demolished. Short sections of new road will connect the ends of the former A14 to Brampton Road and maintain a through-route for light vehicles.

A further, significant feature of the proposed scheme is that a toll will be charged to use the Huntingdon Southern Bypass section of the route.

Proposed scheme

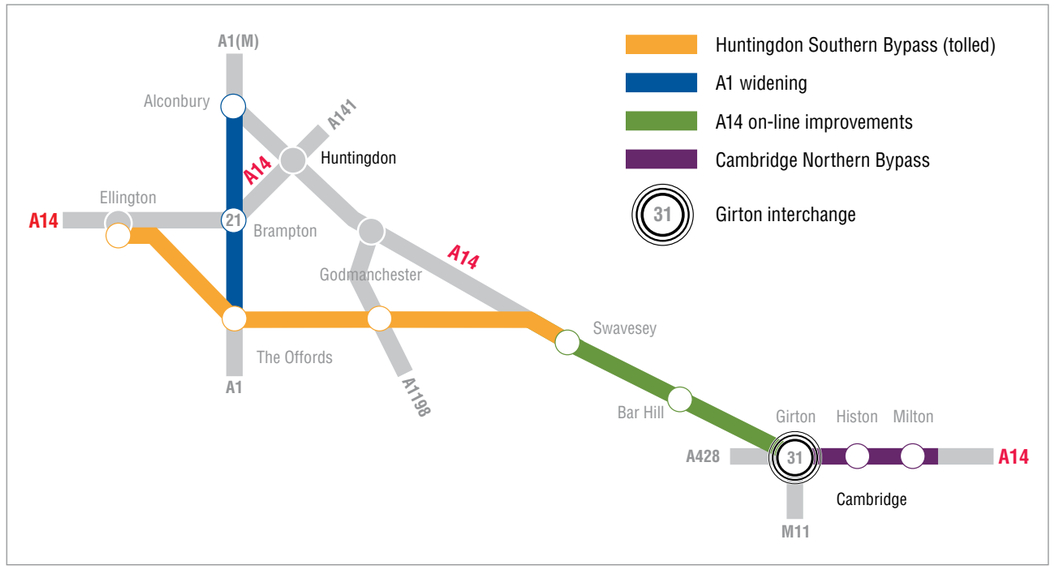


Figure 1

1.2 Junctions and accesses

The following pages provide a detailed description, and illustration, of each of the planned junction arrangements along the route of the proposed scheme. Note that these are at an early stage of development and are therefore subject to change as the design progresses.

Ellington junction

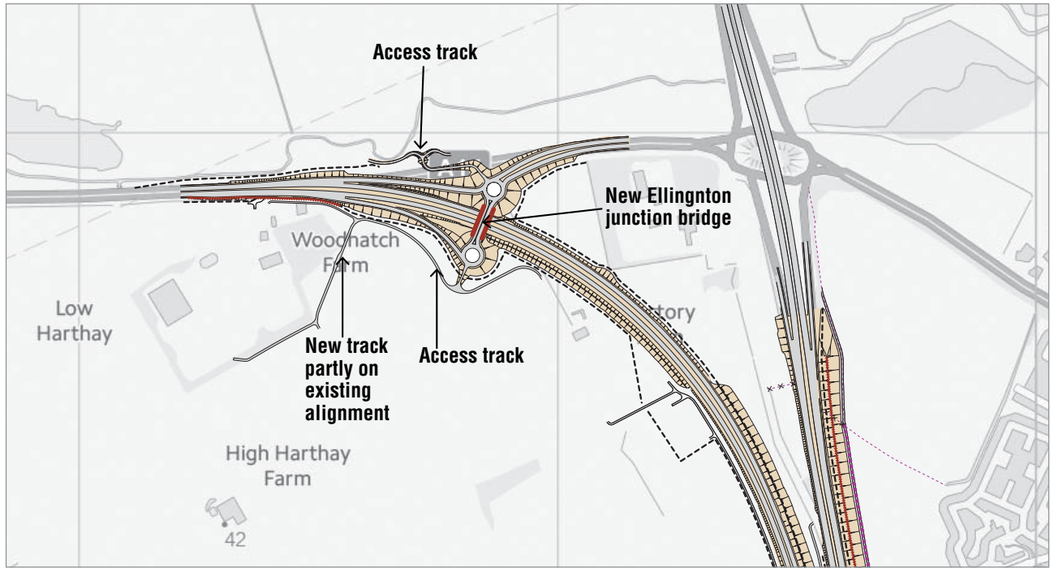


Figure 2

Ellington junction is at the westernmost point of the scheme and will provide a connection with the existing A14 to the west of Huntingdon.

The main-line dual carriageway, which currently continues to a roundabout junction at Brampton Hut, will instead be diverted onto the new Huntingdon Southern Bypass, which will proceed in a southerly direction towards Brampton.

The new Ellington junction will accommodate movements to/from the west using west-facing slip roads, which will permit access to the A1 at the existing Brampton Hut junction and at Huntingdon.

Brampton interchange

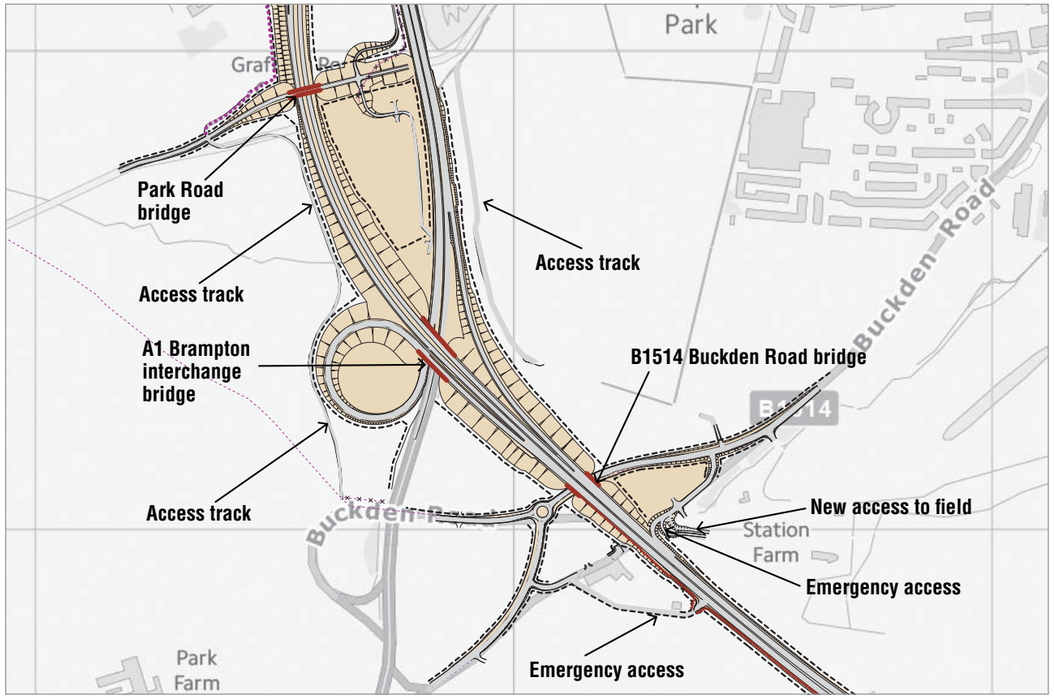


Figure 3

The new Brampton interchange will provide a connection between the A14 Huntingdon Southern Bypass and the A1. It will permit movements between the southbound carriageway of the A1 to the eastbound carriageway of the new A14; and from the westbound A14 to the A1 northbound.

Movements not accommodated by this interchange can be made by using Ellington junction and the existing Brampton Hut junction; forecasted traffic demand for these movements is not sufficient to justify the additional scheme costs associated with constructing a full interchange.

The A14 Huntingdon Southern Bypass dual carriageway will cross over the existing A1 on a new bridge at the interchange.

Godmanchester junction

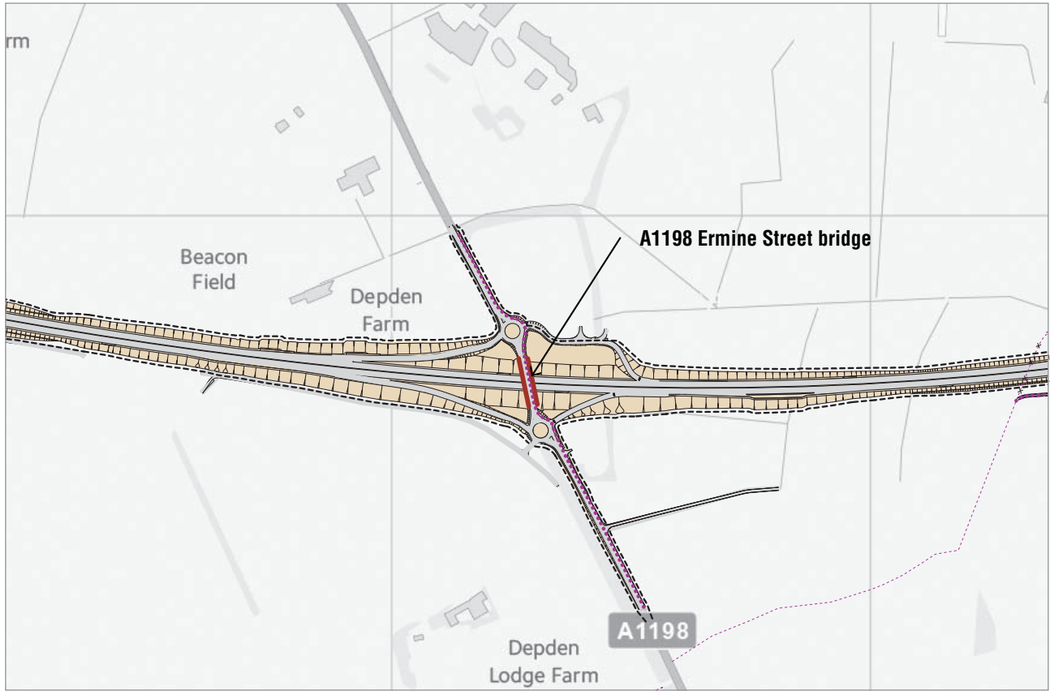


Figure 4

The new Godmanchester junction will provide the connection between the A14 Huntingdon Southern Bypass and the A1198 Ermine Street. It will accommodate movements to, and from, the west by means of west-facing slip roads, which will permit access to the A1198 north, towards Godmanchester, St Ives and the east of Huntingdon and south to Papworth Everard and the A428.

The main-line dual carriageway will be in a cutting, which will allow the A1198 to pass over it on a bridge approximately at the surrounding ground level.

Provisions for non-motorised users will be included over the new bridge to ensure that existing routes are maintained.

East-facing emergency slip roads are proposed, but under normal circumstances their use will be restricted to emergency services vehicles.

Swavesey junction

Figure 5

The new Swavesey junction will be located in the vicinity of the existing junction and at the end of the new Huntingdon Southern Bypass, where it will join the existing, widened A14.

The junction will provide connections between the A14, the local access road and the local road network (including Cambridge Services), with a new bridge over the A14.

The new local access road to the north of the A14 heading west will link the de-trunked 'old A14' to/from Huntingdon, Godmanchester and St Ives with this junction. Heading east, the local access road will continue to Bar Hill junction, linking local accesses and providing a route for non-motorised users away from the A14.

Bar Hill junction

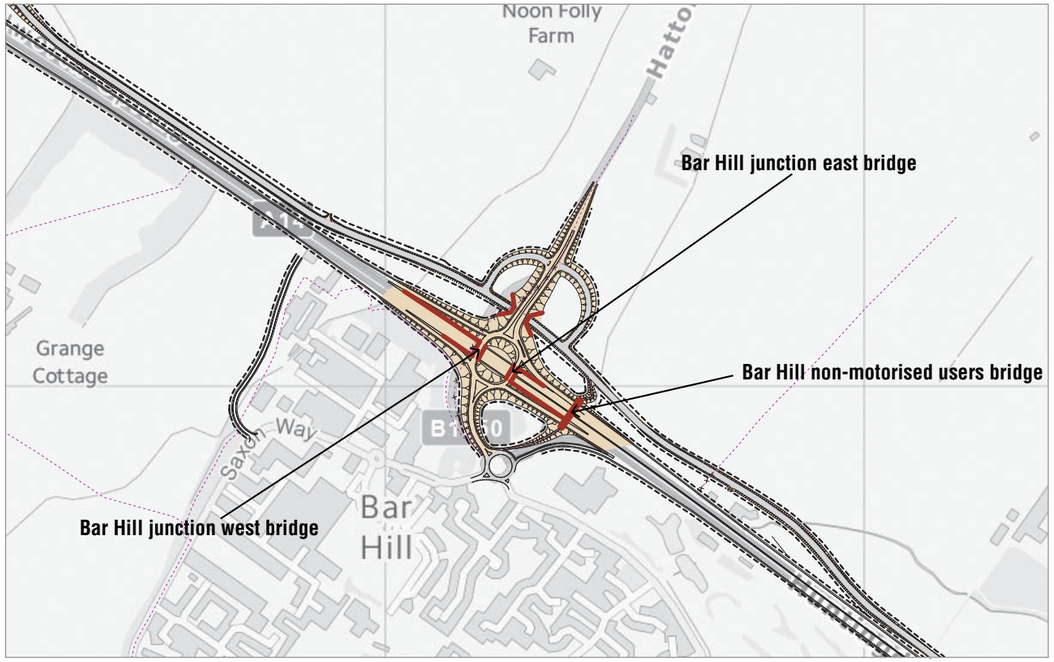


Figure 6

The New Bar Hill junction will be located near to the existing junction. It will consist of a gyratory with two new bridges over the A14. It will provide connections between the A14, the local access road and the local road network (including access to the villages of Longstanton and Bar Hill and the proposed Northstowe development).

A separate bridge for non-motorised users (NMU) will be provided to allow them to cross the A14 away from motorised traffic. This will link to the footway/cycleway alongside the new local access road to the north of the A14 heading east towards Cambridge or west to Swavesey junction.

The junction at Bar Hill will be designed to accommodate the increase in traffic, which is forecast as a result of the Northstowe development.

Girton interchange

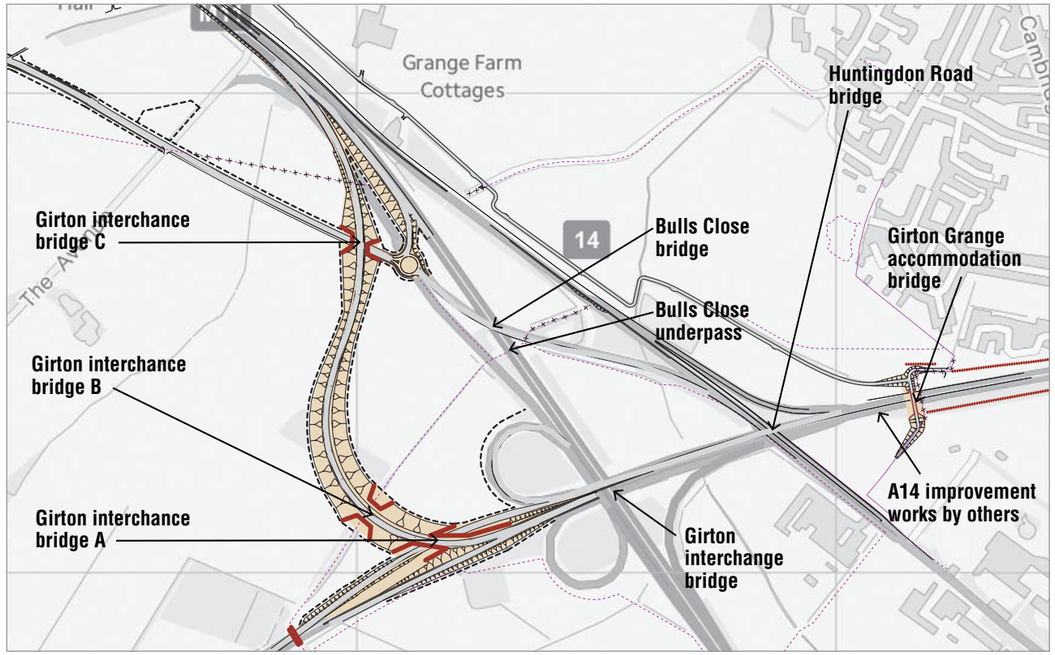


Figure 7

Girton interchange (M11 junction 14) is at the intersection between the A14, M11, A428 and the A1307 Huntington Road (an important arterial route into Cambridge). The improvements will provide two lanes in each direction for A14 traffic through the interchange and maintain all existing movements through the interchange.

The slip road will be widened to provide additional capacity and reduce delays, helping drivers as they travel eastbound on the A14.

The existing westbound spiral will be replaced by a free-flow link, which will improve safety and further reduce delays.

Provision for non-motorised users will be made along the route of the local access road, linking into the A1307 Huntingdon Road.

Histon junction

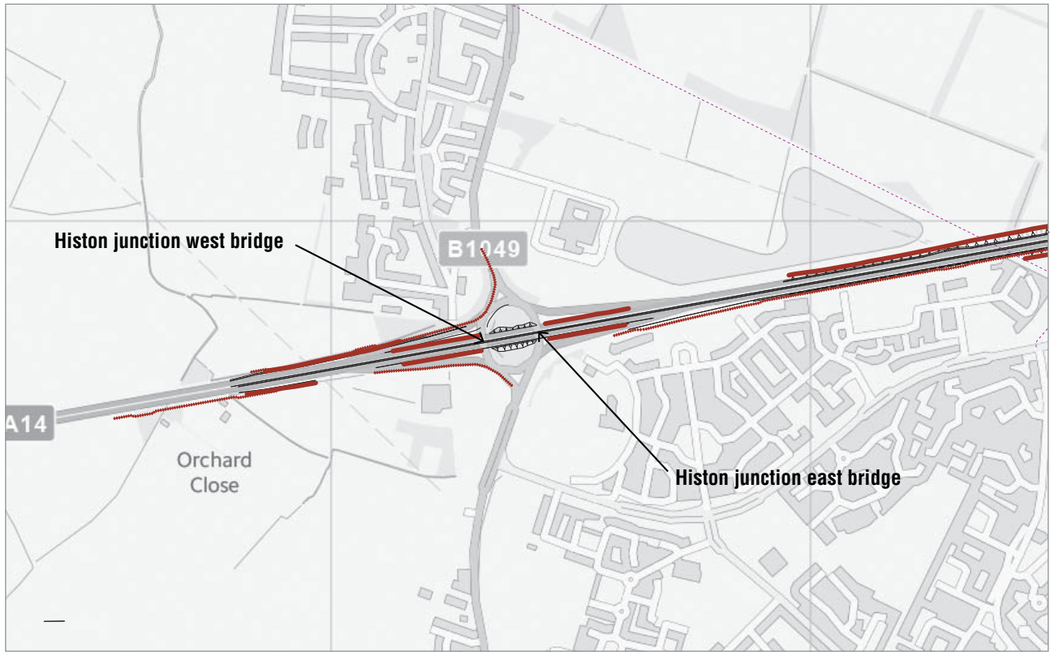


Figure 8

The main-line A14 dual carriageway will be widened to three lanes in each direction west of the Histon junction by means of an approved Highways Agency scheme, which is due to start in 2014.

Widening will be extended through the junction and east to Milton junction as part of the A14 Cambridge to Huntingdon scheme. This can be achieved without major changes to existing structures.

An additional lane at the top of the eastbound off-slip will be provided to reduce queuing at the junction.

Milton junction

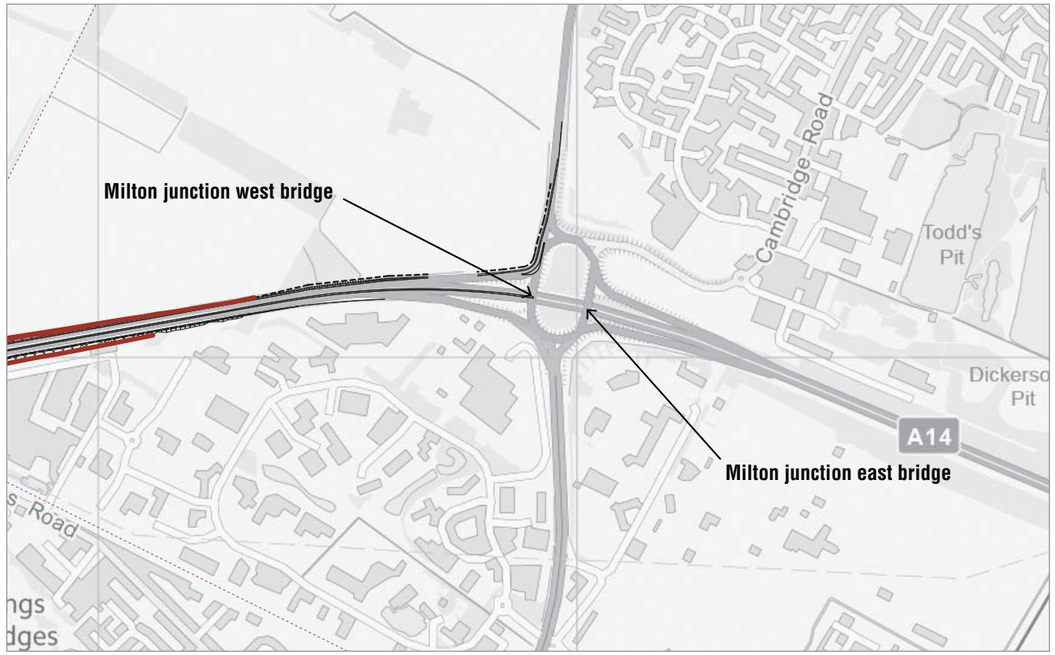


Figure 9

Milton junction will be the easternmost limit of the scheme and the point at which the widening of the A14 will end.

An additional lane at the top of the eastbound off-slip will be provided to reduce queuing at the junction. Strengthening works to the eastern bridge at Milton junction will provide space for an additional lane on the gyratory, which will also reduce queuing.

Dry Drayton

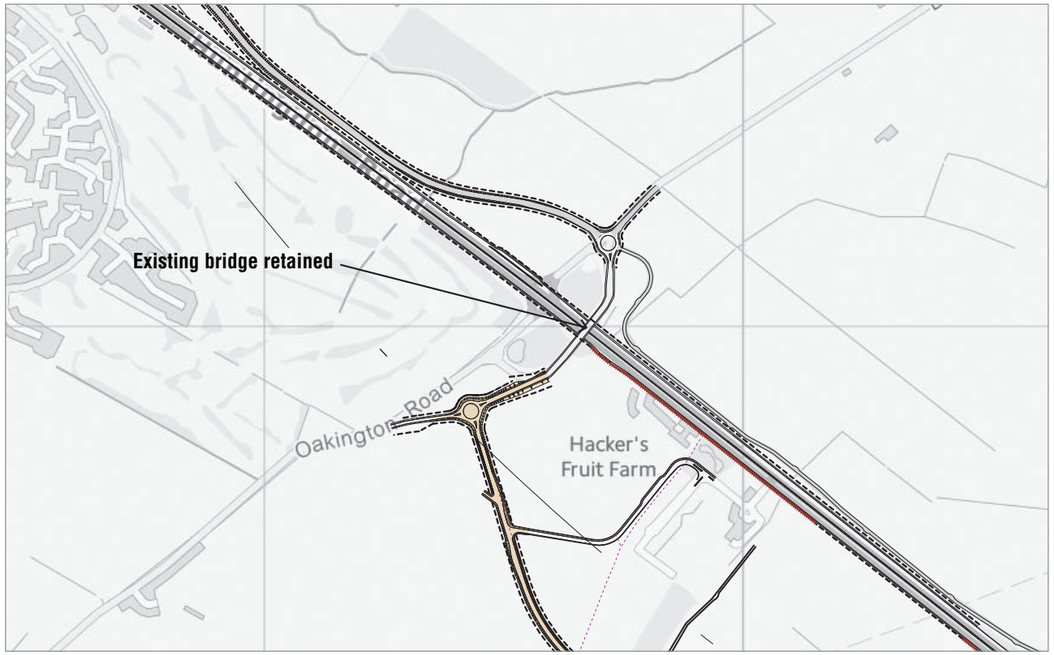


Figure 10

The existing slip roads at Dry Drayton will be closed to provide space for an additional lane on the A14 in each direction and to remove the traffic weaving between the closely spaced junctions at Bar Hill, Dry Drayton and Girton. Access to the A14 eastbound and westbound will be provided at Bar Hill junction; access to the A14 westbound is additionally provided at Girton interchange.

The existing over-bridge will be retained to carry the new local access road from the north of the A14 to the south, and to link into Dry Drayton Road and Oakington Road.

A footway/cycleway will be included in the verge of the local access road, linking into the A1307 Huntingdon Road into Cambridge, to provide a route to, and from, Cambridge that is separated from A14 motorised traffic.

1.3 De-trunked route

De-trunked route in Huntingdon

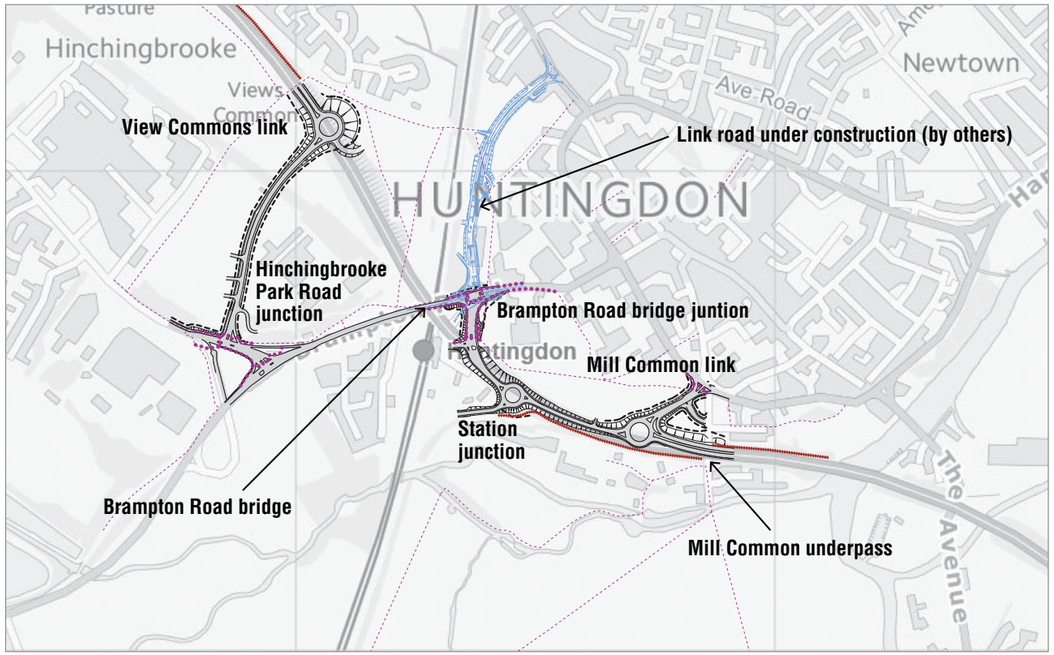


Figure 11

The Huntingdon Southern Bypass will provide a new strategic through-route for east and westbound traffic on the A14. Once complete, it will be possible to downgrade the section of the former A14 that runs through Huntingdon. The Highways Agency is working with its local authority partners to determine what local arrangements will work best on this downgraded section of road as, when the changes take place, the highway will be de-trunked and responsibility for its upkeep will pass to Cambridgeshire County Council as the local highway authority.

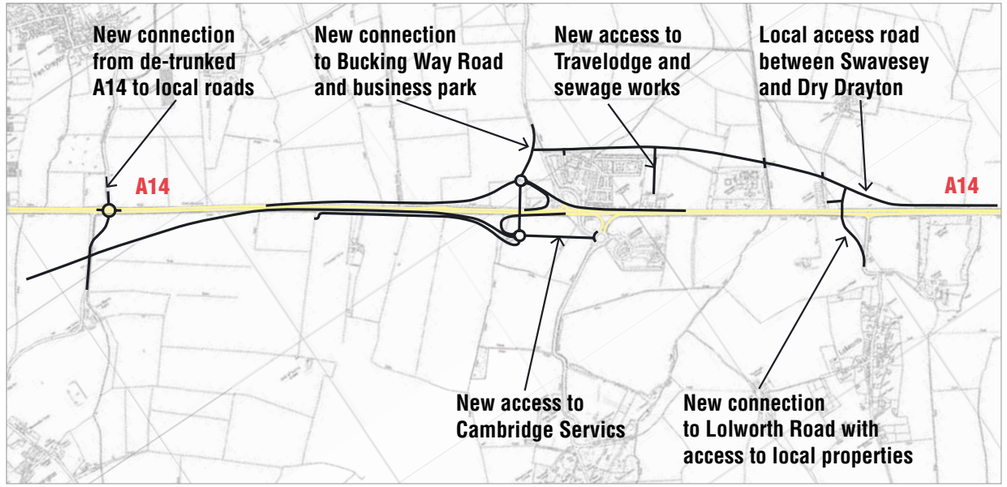
A key element in this de-trunking work will be the removal of the A14 bridge over the East Coast Mainline railway and Brampton Road, close to Huntingdon Station. This is an ageing, unattractive concrete structure, which has become difficult and costly to maintain and which creates a significant degree of physical severance in the heart of Huntingdon. Removal of the bridge and its associated earth embankments will open up opportunities for improvements in the townscape in the vicinity of the station and will eliminate a long-term maintenance liability for the highway authorities.

However, the Highways Agency recognises the need to retain a through-route in the A14 corridor for local traffic and is proposing the arrangements shown in Figure 11. Roundabouts will be built at each end of the severed dual carriageway and link roads will be constructed to reconnect the former A14 via Brampton Road. Access to the railway station will be provided directly from the new section of link road connecting Brampton Road and the inner ring road.

Downgrading of the A14 through Huntingdon will result in a significant reduction in traffic volumes in the town and will have beneficial effects in terms of noise and air quality. It will realise the aims of the Huntingdon West Area Action Plan and will tie in with a new town centre link road that is already under construction. It will provide an enhanced visual gateway to the town and will enable central areas of Huntingdon to regain a level of tranquillity that was lost when the original dual carriageway was built.

1.4 Local road network improvements

Local road arrangements


New connection from de-trunked A14 to local roads
New connection to Bucking Way Road and business park
New access to Travelodge and sewage works
Local access road between Swavesey and Dry Drayton
A14
A14
New access to Cambridge Services
New connection to Lolworth Road with access to local properties

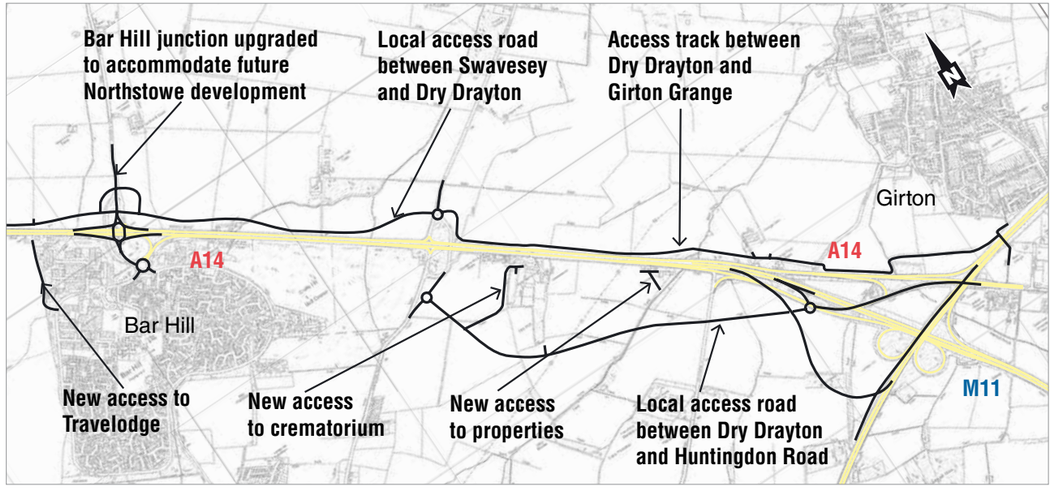

Bar Hill junction upgraded to accommodate future Northstowe development
Local access road between Swavesey and Dry Drayton
Access track between Dry Drayton and Girton Grange
Girton
A14
A14
Bar Hill
New access to Travelodge
New access to crematorium
New access to properties
Local access road between Dry Drayton and Huntingdon Road
M11

Figure 12

A new road will provide a route for local traffic between Cambridge and Huntingdon as well as providing access to properties and businesses along this corridor. From Fen Drayton, the new road will run on the north side of the improved A14 trunk road until it reaches the new Swavesey junction. Here it will connect with Bucking Way Road and the business park, continuing east to Bar Hill and a second junction between the A14 and the side-road network.

From Bar Hill, the local road will continue east as far as Dry Drayton, where it will cross the A14 to continue on the south side of the trunk road. The existing junction with the A14 at Dry Drayton will be closed (as described on page 27) but the side road link will use the existing over-bridge to cross the dual carriageway.

Continuing eastwards on the south side of the A14, the new local road will include an access to the crematorium and to various properties, before joining the A1307 at Huntingdon Road, on the outskirts of Cambridge.

The local road will help to separate local traffic from strategic movement and will provide an improved environment for more vulnerable road users such as cyclists and pedestrians. It will make the trunk road safer as the number of side-roads joining it will be reduced, and it will provide an easier, less congested commuter route into, and out of, Cambridge.

1.5 Tolling

The A14 Cambridge to Huntingdon improvement scheme is one of the UK's largest highway projects and will cost up to £1.5bn to develop. This is a scheme that is made more affordable by using a combination of central Government funds, local government contributions, and the introduction of tolls on part of the scheme.

The use of tolls to finance major highway infrastructure projects is not new in Britain and is the means in which the Queen Elizabeth Bridge at Dartford, the M6 toll, and the second Severn Crossing have been funded. Not all road projects need to be funded in this way, but because of the scale of this scheme. The A14 Cambridge to Huntingdon project represents more than a tenth of the Highways Agency's current budget (to 2020) for road schemes across the whole of England.

Under the proposed scheme, tolls would be applied in both directions over the length of the Huntingdon Southern Bypass, between the junction at Ellington and that at Swavesey (see Figure 13). Tolls would apply along this entire length and would be the same for vehicles accessing the toll-road at Brampton or Godmanchester.

Most through-traffic will opt to use the new toll-road; however, local traffic in Huntington may choose to use the de-trunked A14 corridor and the new link roads described in the previous section. This will only be available for light vehicles as there is a weight restriction on Brampton Road, which will form part of the route once the A14 bridge over the railway is demolished.

The Highways Agency will signpost an alternative, toll-free trunk road route for through-traffic via the A428 from Cambridge to St Neots, and then via the A1 from St Neots to Brampton Hut (see Figure 14).

A strategic aim of the A14 Cambridge to Huntingdon improvement scheme is to separate strategic, long-distance traffic from local commuter movements and local traffic; and the tolling arrangements being proposed would help to achieve this. Benefits will range from reduced congestion on local roads to improvements in safety and quality of life in towns and villages.

The Highways Agency recognises that toll-plazas are inefficient and will add to the very delays that this scheme seeks to eliminate. For this reason, the Agency would introduce an innovative free-flow -tolling system, whereby users are identified using automatic number plate recognition (ANPR) technology and payment is made either on account, online or across the counter at shops or petrol stations. The technology is similar to that used by Transport for London to enforce the London congestion charge.

The toll would be likely to apply to all classes of motor vehicles using the road between the hours of 0600 and 2200 on a 'per trip' basis, seven days a week. There would be a small number of exemptions from tolling, including emergency service vehicles and vehicles used specifically to carry disabled people, but all other users, including foreign-registered vehicles, will pay.

Toll tariffs have yet to be decided, but initial calculations suggest that tolls of between £1.00 and £1.50 (based on today's prices) for cars would be realistic, with heavy goods vehicles paying around double this figure. Prices would rise in line with inflation and penalty charges would be imposed for non-payment. The tolling system would be well publicised to ensure that road users are made aware that they are entering a tolled section of road and to explain how the payment system works.

Toll revenue is an important component in the business case for this road scheme. The tolling strategy developed by the Highways Agency has considered the impact of tolling on the overall scheme economics and the likely diversionary effect arising from the introduction of tolls. The optimum tolling solution must therefore be one in which toll revenue makes a meaningful contribution to the financing model, while representing good value for money compared with the alternative routes.

In return for paying to use the new road, drivers can expect to experience a far higher level of service – including relief from the long-standing problem of congestion – than has been associated with this route in recent years.

Proposed toll-road arrangements

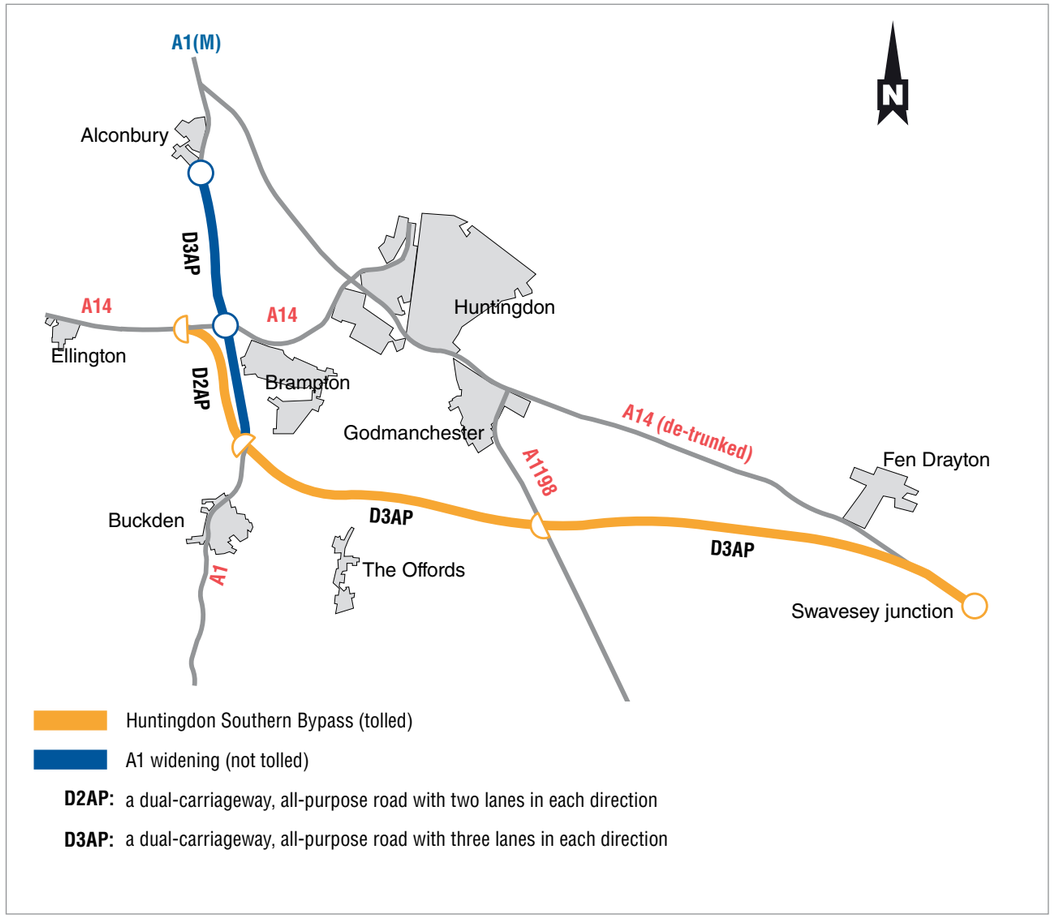


Figure 13

Toll-free alternative routes

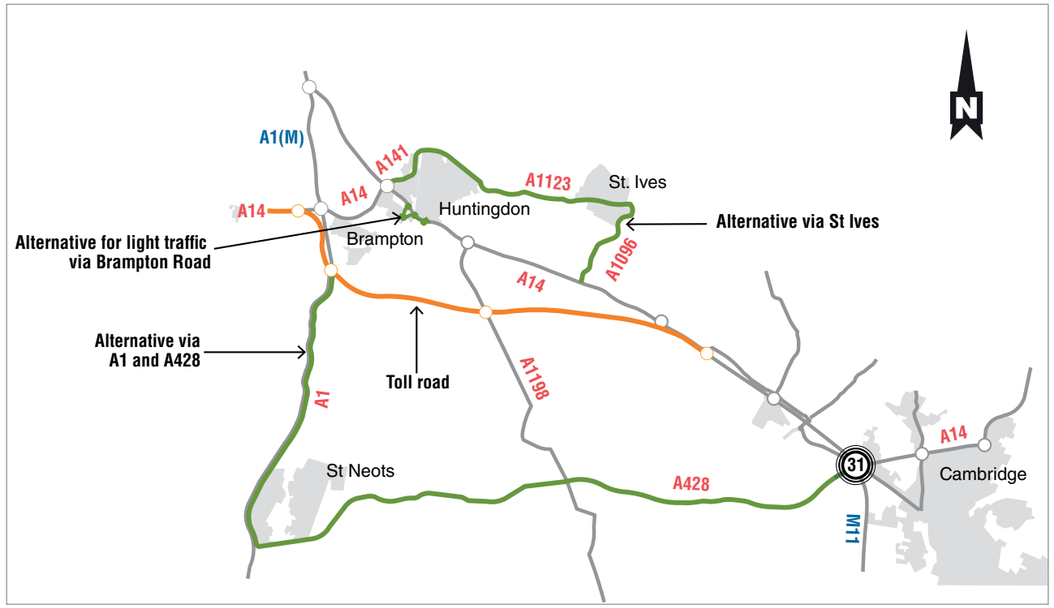


Figure 14

1.6 Landscape and environmental considerations

The A14 Cambridge to Huntingdon improvement scheme passes through a variety of urban and rural landscapes; from undulating countryside and the Ouse Valley in the west, through the flat and open fenland in the central sections, to the urban corridor through which the Cambridge Northern Bypass passes. Choosing the best environmental and landscape solution in this corridor is an important consideration.

In any scheme there will be adverse and beneficial effects and these need to be balanced when choosing route options. The effect of the scheme on the environment also has to be balanced with other factors, such as cost and construction methodology, but the Highways Agency always seeks to promote a scheme that limits its impact on the environment. In developing the scheme proposals there is an important link between the assessment of effects and the development of the design so that adverse effects have an influence on the design of the scheme itself. Where a scheme creates unacceptable impacts, the design will be reviewed and amended to limit the impact on the environment.

The Highways Agency, along with its partners in the local councils, is committed to delivering a solution that goes much further than the minimum levels of mitigation set down by environmental legislation. The aim is to create a legacy in which the design solution forms part of a wider environmental and socio-economic strategy that achieves a balance of benefits and enhances the quality of life and opportunity for those living in the Cambridge sub-region.

Over the years, the Highways Agency has developed a comprehensive method of assessing the environmental effects of road schemes and designing appropriate environmental mitigation. The Design Manual for Roads and Bridges (DMRB) is widely recognised by environmental bodies, stakeholders and the public as the most appropriate way of evaluating the impact of road projects. The DMRB has been used in the development of this scheme and has formed the basis for the Environmental Statement (ES) for the previous Ellington to Fen Ditton scheme (see Section 3.1) as well as the Environmental Assessment Report for the recent options phase to inform the decision on which option to progress. The DMRB is being used to assess the impacts of the current scheme proposal. This assessment will be carried out as part of the design development and will influence the design of the proposal. During this process there will be regular and frequent liaison with environmental stakeholders to take account of their knowledge of the local environment and inform them of the progress of the assessment. There will also be liaison with stakeholders, landowners and local people on the development of the scheme and environmental mitigation proposals. The intention is to ensure that the effect of the scheme on local people and the environment is minimised as far as possible.

The results of the assessment and scheme development will be reported in an ES, which will describe the scheme, including all the mitigation proposals and report in a clear and factual way the adverse and beneficial effects of the scheme. There will also be a Non-Technical Summary of the ES which will present the findings in a short, accessible document written in a non-technical language. Both documents will be publicly available when completed.

As the scheme progresses, the environment will continue to be an important consideration in the development, with further refinement and detail added to the proposals in consultation with stakeholders and the public. At the construction phase, a Construction Environmental Management Plan will be prepared, which will document how the environmental effects of the scheme will be managed on site to limit adverse effects.

Section 2:
Scheme economics and funding

2.1 Modelling traffic flows

The analysis of existing traffic flows and the predicted growth in demand over a period of time will generally form the basis for assessing the scope of highway improvement schemes. Computer-based traffic models are used to replicate the existing road network and to analyse the impact of proposed changes in the road layout on vehicle movements, both under current conditions and in future years.

The pattern of traffic movements in the A14 corridor is well understood, as a result of several major traffic modelling exercises undertaken over the past few years. These include the work undertaken for the previous A14 Ellington to Fen Ditton scheme and the Cambridge Transport Innovation Fund study, together with more recent work in connection with the Department for Transport's A14 Study in 2011/12. The results of recent driver interview surveys carried out by the Highways Agency will be used to supplement the existing model information.

The key steps in the process used to model traffic demand in the A14 corridor are as follows:

1) a traffic demand model is prepared, using data from previous surveys, together with new information collected from vehicle counts and driver interviews
2) the model is updated to take account of forecast changes in traffic demand in order to assess future traffic
3) the model is adjusted to take account of future changes predicted in housing and employment, recognising that in Cambridgeshire the number of households is forecast to rise by 28 per cent in the study period, while employment is forecast to increase by 22 per cent
4) other elements that are incorporated in the traffic forecast model reflect the impacts of the Department for Transport's rail freight strategy, as described in the A14 Study
5) a 'do-minimum' model is produced, reflecting the changes in traffic demand that would occur on the existing road network, assuming that the improvement scheme did not proceed
6) proposals for the A14 Cambridge to Huntingdon improvement scheme are added to the traffic model, to demonstrate the effects that this will have on flow patterns on the existing road network as well as the new infrastructure
7) the impact of direct tolls is assessed, recognising the diversionary effect on some traffic movements, as some drivers will be prepared to travel further to seek a free alternative to the toll-road (this becomes the 'do-something' model that will be used as a comparator for the purposes of analysis)

Traffic model

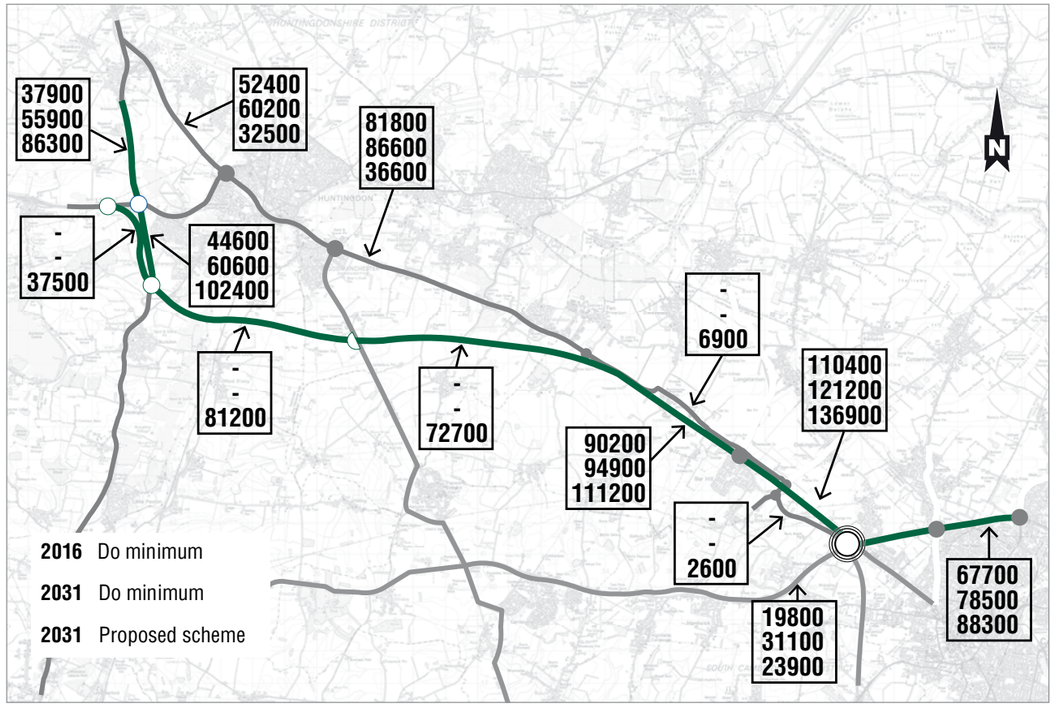


Figure 15

The traffic figures in the above diagram show the levels of traffic on the existing and proposed road network at the point when construction starts and again in the 'design year' for the scheme. The design year is the point in time used to estimate the future capacity requirements of the road network. The 2031 "do-minimum" traffic levels are the traffic flows which would be likely to occur if the improvement works were not undertaken

The outputs from the traffic model are used to ensure that the scheme meets the expected traffic demands at the time of the road opening and in the future. These outputs help to ensure that the scheme is designed to an appropriate standard and will form the basis for assessing a range of environmental, social and economic impacts – such as noise, air quality, congestion and community severance – which are dependent upon traffic volumes and flow patterns. In this case, the outputs of the traffic model can also be used to estimate the likely toll revenue that the scheme will generate over time.

While the existing transport model provides an adequate assessment of the scheme, the transport model will need to be updated to reflect the changing plans relating to housing, employment and other transport schemes. The model will also be updated, as more data emerges on traffic levels and transport usage. This further work will continue as the scheme is developed.

Current and future year traffic flows are shown for the principal links through the A14 corridor in Figure 15.

2.2 Economic case

In developing its proposals for the A14 Cambridge to Huntingdon improvement scheme, the Highways Agency has evaluated the economic performance of the scheme proposals by applying standard economic modelling techniques that are commonly used across central and local government to judge the relative merits of transport infrastructure projects.

The assessment is developed by comparing forecasted transport conditions should the scheme go ahead (the 'do something' option) with transport conditions should it not be built (the 'do minimum' option). The assessment is undertaken to cover a standard 60-year appraisal period from the proposed date of the scheme opening (end of the decade) up to the last assessment year. All costs and benefits are calculated on a common-price basis that is referred to as the 'present value'. Currently, all projects that are assessed in this manner have the results expressed in terms of 2010 present values.

The principal cost of the scheme to the Government is the capital cost of construction. This includes allowances for any future relative inflation of construction costs and further allowances for risks associated with the future cost of the scheme. The overall cost of the scheme to the Government is reduced by the toll revenue that is forecast. This makes the scheme more affordable.

Benefits of the scheme are principally expressed in the form of time savings that users will experience. Time savings are given a monetary value based on standard values provided by the Government. The values are greater for users travelling for their businesses compared with users travelling in their own time.

Users of the scheme may also experience some disadvantages associated with it (including additional costs). These will take the form of additional vehicle operating costs, mainly in the form of fuel consumption. This reflects the fact that:

a) the proposed scheme represents a longer route for some users

b) traffic speeds will be faster with the scheme than would be the case if the A14 was not improved; hence more fuel may be consumed

A further cost to the user will be that of the toll charge. The cost of this is subtracted from the level of benefit that users of the scheme will experience. Hence the proposed toll has an impact on the economic analysis, both in reducing the user benefit of the scheme and in reducing the cost to Government of the scheme. The total forecast benefits from the economic assessment are referred to as the present value of benefits (PVB), while the forecast costs of the scheme are referred to as the present value of costs (PVC). The difference between the PVB and the PVC is the net present value (NPV).

The economic assessment of the scheme is still at a preliminary stage and further work will be undertaken. This includes the forecast of:

- accident benefit of the scheme
- benefits from reduction in non-accident incidents and journey-time variability
- carbon (greenhouse gases) impact of the scheme
- noise impact of the scheme
- wider impacts on the economy through the improvement of access across the region

These will serve to confirm the level of benefits that the scheme is forecast to deliver.

2.3 How the scheme will be funded

The A14 Cambridge to Huntingdon improvement scheme will be jointly funded by Central Government, the Greater Cambridge Greater Peterborough Enterprise Partnership, and the local authorities in the Cambridgeshire sub-region; together with tolling receipts from road users.

The Government's spending review announcement in June 2013 confirmed that HM Treasury will make up to £1.5bn available to fund the Cambridge to Huntingdon scheme, recognising that tolling receipts and much of the local government funding will be recovered over a 25-year period.

A total of £100m has been raised by local government. The Greater Cambridge Greater Peterborough Enterprise Partnership has pledged £50m to the scheme, to be secured from increases in business rate receipts from new development in the vicinity of the scheme, such as the Alconbury Weald enterprise zone.

Cambridgeshire County Council has worked with neighbouring authorities to bring together a consortium of local authorities and the Greater Cambridge Greater Peterborough Enterprise Partnership in the wider East Anglia region to pledge the other £50m. These contributions demonstrate the commitment and belief that the leaders of the East of England have in the need for this scheme.

The revenue raised from the application of tolls depends upon the level of the tolls and the cost of administering their collection and enforcement. Work is ongoing to make sure that the tolls are set at the right level to recover a significant contribution to the cost of the scheme, and to ensure that they represent good value for money for the road users.

Section 3: Development of the scheme

3.1 CHUMMS and the Ellington to Fen Ditton scheme

The A14 between Cambridge and Huntingdon forms part of an east-west corridor that connects the Midlands and north of England with the east coast towns and cities, the Haven ports, and the south-east of England via the M11 motorway. The A14 corridor has been upgraded over the last three decades and now offers a continuous dual carriageway route between the M1/ M6 and the M11. As a result, it is attractive to long-distance and international travellers and carries a higher-than-average proportion of freight. It is designated as a link in the Trans-European Transport Network.

Issues of congestion, journey-time reliability and road safety on the route between Cambridge and Huntingdon led the Department for Transport to commission a number of studies into possible improvements to the A14.

In the 1990s, a series of working papers was produced, investigating options for widening the A14 to dual three-lane standards. Further studies were subsequently suspended in the Government's review of the trunk-roads programme. However, the strategic importance of the A14 was considered as part of the Department for Transport's Cambridge to Huntingdon Multi-Modal Study (CHUMMS).

The final CHUMMS report, published in 2001, made a number of recommendations. These included:

- a rapid transit (guided bus) system
- Cambridge and surrounding village traffic-calming measures and minor highway improvements
- improvement of the A14 between Cambridge and Huntingdon

The highway improvements element of the CHUMMS strategy was developed further in 2002/3 and the A14 improvement scheme was recommended by the Highways Agency for entry into the Targeted Programme of Improvements (TPI) as the A14 Ellington to Fen Ditton (EFD) scheme. A review of the route options considered in previous studies was undertaken and a number of alternative route options was identified, based on the principles established in the CHUMMS report for a southern bypass of Huntingdon and on-line improvements of the eastern portion of the route. Options rejected in CHUMMS were not re-examined.

A stage-two scheme assessment report was produced that identified the factors taken into account when choosing alternative schemes and the environmental, engineering, economic and traffic advantages, disadvantages and constraints associated with those schemes. This report enabled the public and statutory bodies to comment

on alternative proposals, taking into consideration the environmental, economic and traffic implications of each scheme.

Public consultation on the proposals was started in May 2005 and concluded in early 2007. Following the 2005 public consultation, a 'further public consultation' on route options between Ellington and Fen Drayton was held in 2006, including an additional route option passing through the Buckden Landfill Site. Proposals for the section of the scheme between Fen Drayton and Fen Ditton were not included in this further public consultation.

The Highways Agency promoted the improvement scheme, publishing the environmental statement and draft orders in October 2009 and holding draft orders exhibitions for the public. Preparation for the public inquiry was underway, when, as part of the 2010 comprehensive spending review, the Government announced that the scheme was unaffordable in its current form. The Highways Agency withdrew the route protection for the entire scheme shortly after cancellation.

The scheme being promoted by the Highways Agency today has many of the characteristics of the Ellington to Fen Ditton scheme, which provides the Agency with access to more than a decade of studies and investigations into aspects of the proposals.

3.2 A14 Study

In late 2011, the Department for Transport commissioned a multi-modal study to identify 'cost-effective and practical proposals which bring benefits and relieve congestion' through the A14 corridor between Cambridge and Huntingdon. Over a period of 12 months, the study examined options for addressing traffic congestion and resilience in the A14 corridor, together with road safety and sustainability issues.

The study was commissioned in three parts to:

1) gain an understanding of the nature, scale and importance of the problems affecting the A14 strategic route in the Cambridge and Huntingdon areas, and to develop a list of prioritised challenges to deal with the transport problems and their consequences

2) generate and sift potential interventions and recommend a shortlist

3) develop a multi-modal package of interventions that tackle the prioritised challenges and create a scheme that is affordable, deliverable and offers value for money

Study output reports are available to the public on the Department for Transport's website: www.gov.uk/government/consultations/a14-challenge

The A14 Study identified a range of interventions, which comprised a public transport package, a rail-freight package, and a road package.

The public transport package recommended by the study included a park-and-ride site at Alconbury; a new local bus service between Cambridge city centre, Bar Hill and Cambridge Science Park; and an express bus service between Peterborough and Cambridge. The public transport package was forecast to result in only a modest increase in net public transport demand in the study area (150 passengers in the three-hour morning peak period by 2031). This equates to a 1 to 2 per cent increase in public transport trips in the study area.

The freight package recommended by the study aimed to reduce HGV traffic on the A14 by encouraging a transfer of freight movements from road to rail. This centred on traffic moving between the Haven Ports and the Midlands North and concentrated on measures for improving the Felixstowe to Nuneaton route to achieve shorter journey times and to enable longer trains and additional freight paths to be introduced. The package recommended also included private-sector delivery of new and expanded strategic rail freight infrastructure. The rail freight package was forecast to reduce HGV traffic on the A14 in the core study area by up to 11 per cent, which will offset 60 to 80 per cent of the forecast growth in HGV traffic on the A14 between 2011 and 2031. A scenario in which the freight package is implemented, and therefore these reductions in HGV traffic are achieved, formed the baseline against which the highway packages were assessed.

The roads package considered 21 un-tolled highway packages that varied considerably in scale, location and components. These were evaluated through two rounds of testing against the agreed success measures for the study; namely:

- reduction of lost productive time
- supporting the growth of the wider UK economy
- supporting the growth of Greater Cambridgeshire
- improving access to labour markets
- improving quality of life and welfare
- reducing the number of accidents on the A14
- reducing air quality and noise impact

As a result of this evaluation process, six highway packages emerged. These are described in the next section. Further consideration was given to these options against economic, environmental, and social and community criteria, and also against their suitability for tolling.

3.3 A14 Study: highway package options 1 to 6

Option 1

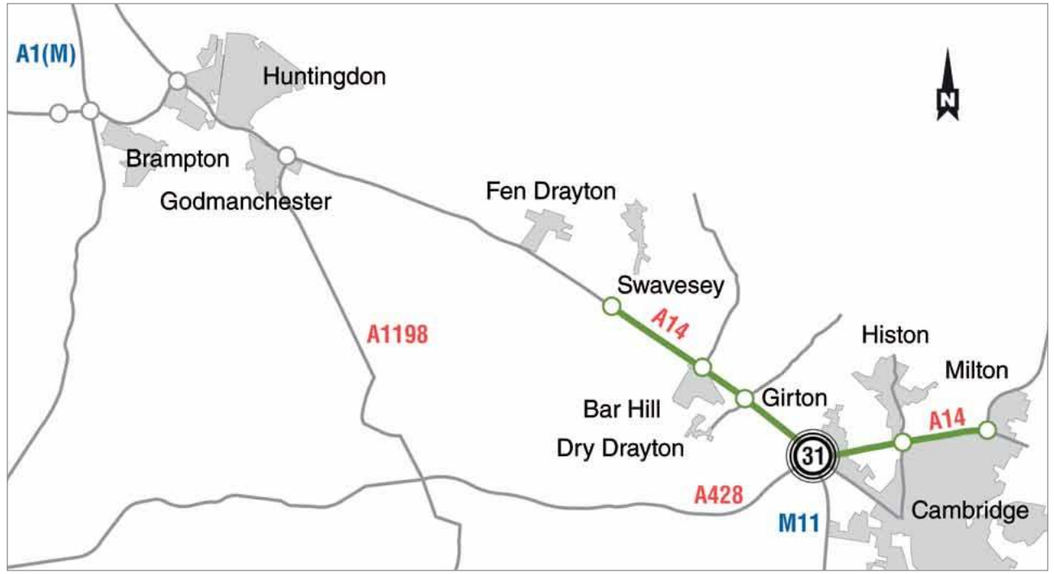


Figure 16

Option 2

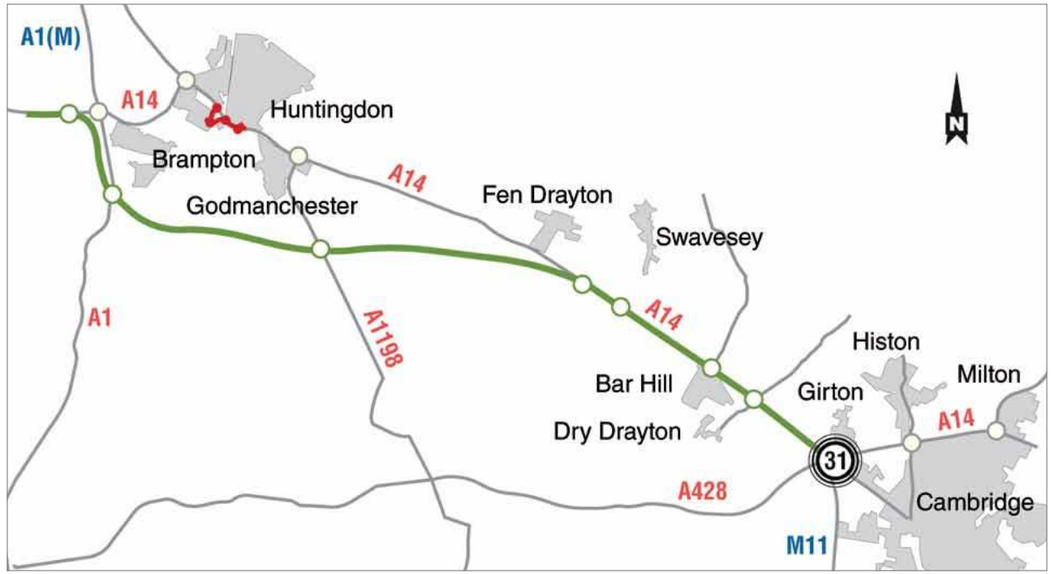


Figure 17

Option 3

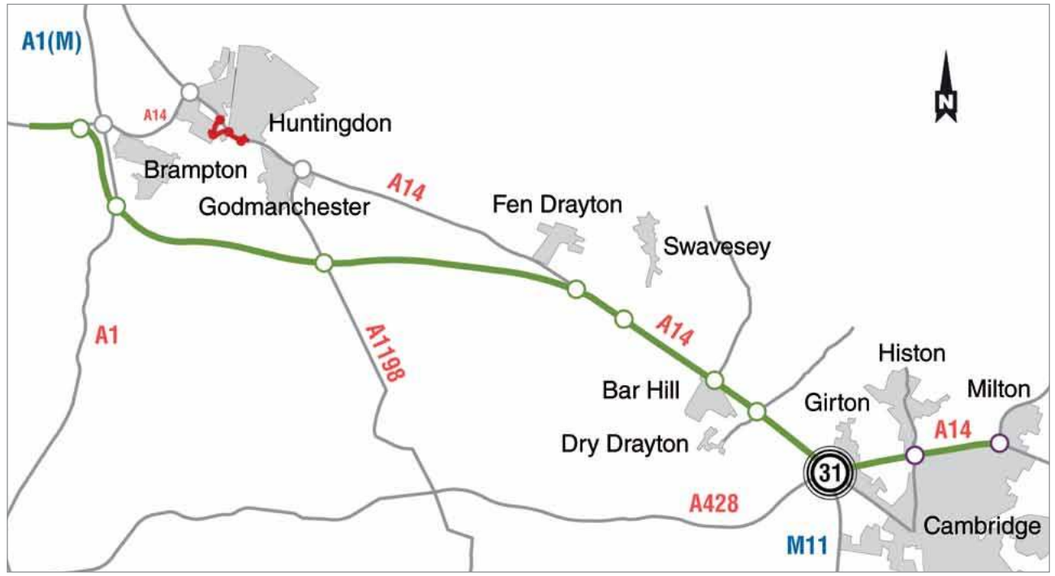


Figure 18

Option 4

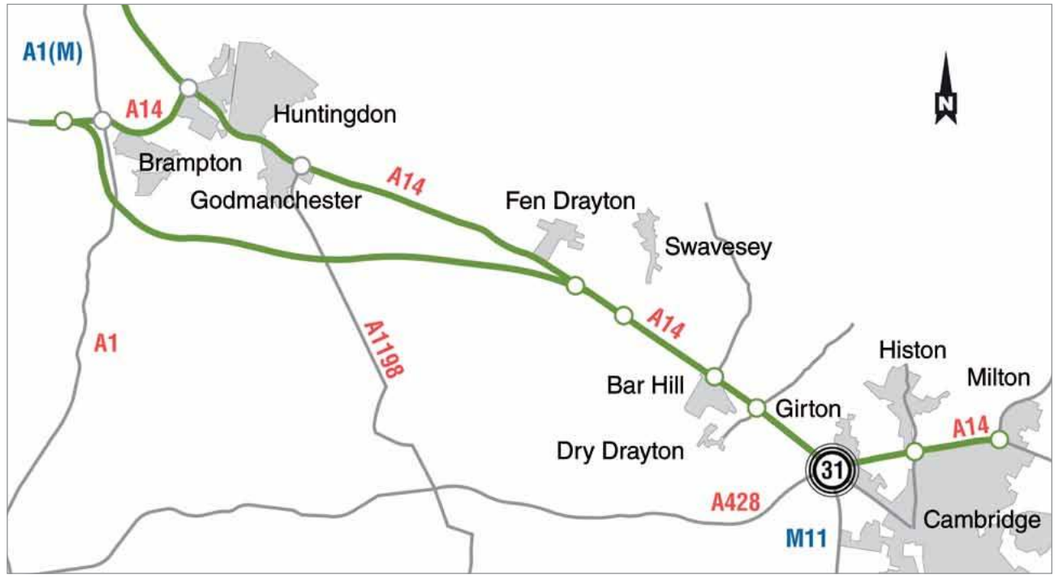


Figure 19

Option 5

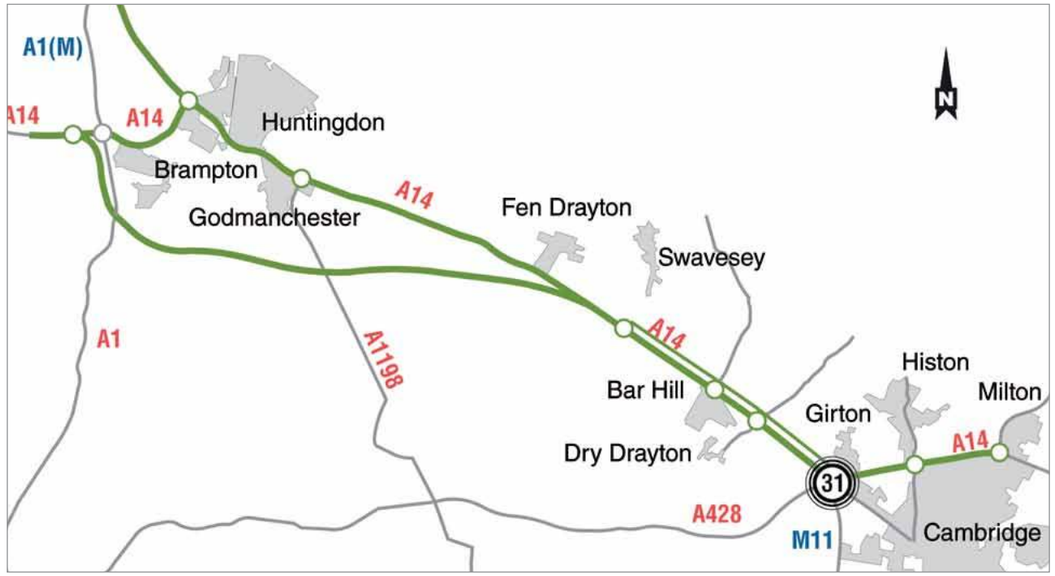


Figure 20

Option 6

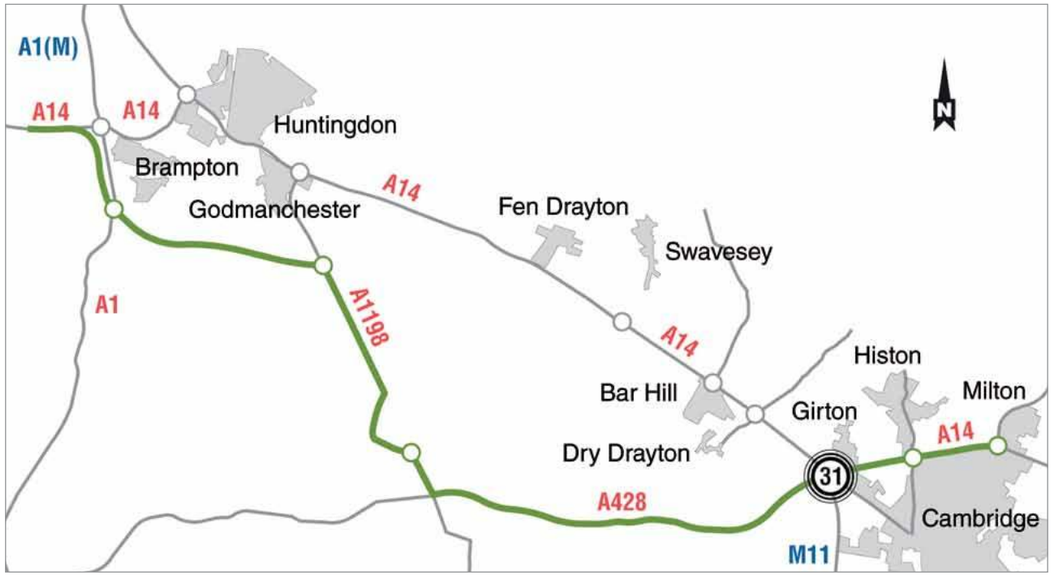


Figure 21

	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6
Description of scheme	Improvement of Cambridge Northern Bypass, enhancement of Girton junction, and the provision of local access roads between Girton and Trinity Foot. Retention of the existing A14 trunk road between Trinity Foot and Ellington.	No improvement of Cambridge Northern Bypass, limited enhancement of Girton junction, on-line widening and new junctions between Trinity Foot and Girton. Construction of D3AP Huntingdon Southern Bypass between Trinity Foot and Ellington with A1 junction at Brampton. De-trunking of bypassed sections of A14 and removal of the A14 bridge across the East Coast Mainline.	Improvement of Cambridge Northern Bypass, limited enhancement of Girton junction, on-line widening and new junctions between Trinity Foot and Girton. Construction of D3AP Huntingdon Southern Bypass between Trinity Foot and Ellington with A1 junction at Brampton. De-trunking of bypassed sections of A14 and removal of the A14 bridge across the East Coast Mainline.	Improvement of Cambridge Northern Bypass, limited enhancement of Girton junction, on-line widening and new junctions between Trinity Foot and Girton. Construction of D2AP Huntingdon Southern Bypass between Trinity Foot and Ellington (no junction with A1). Existing A14 past Huntingdon retained.	Improvement of Cambridge Northern Bypass, full enhancement of Girton junction, on-line widening and new junctions between Trinity Foot and Girton, together with new local access road. Construction of D2AP Huntingdon Southern Bypass between Trinity Foot and Ellington (no junction with A1). Existing A14 past Huntingdon retained.	Improvement of Cambridge Northern Bypass, enhancement of Girton junction to enable free-flow to A428. A428 widening to D4AP between Girton and Caxton Gibbet. A1198 widened to D3AP north of Caxton Gibbet to intersection with D2AP Huntingdon Southern Bypass, which continues west to Ellington with junction onto A1 at Brampton. Existing A14 de-trunked between Girton and A1/A1(M).
Transport benefits	The ability to achieve transport benefits is limited by the smaller scale of this scheme. It does not resolve congestion issues around Huntingdon and does not separate local from strategic traffic. Delays will slightly increase on the A428 eastbound as the Cambridge Northern Bypass improvements draw more through-traffic along this route.	The scheme generates significant journey-time savings, provides a direct strategic route between Cambridge and the west of Huntingdon. Local and strategic traffic will continue to mix on widened sections from Trinity Foot to Girton. A lack of improvements on the Cambridge Northern Bypass means that congestion issues are not fully resolved and delays eastbound towards Histon will increase. There will also be a notable increase in delay on the A1 southbound approaching Brampton Hut.	The scheme generates significant journey-time savings, provides a direct strategic route between Cambridge and the west of Huntingdon and the route adequately addresses congestion issues. Local and strategic traffic will continue to mix on widened sections from Trinity Foot to Girton, but de-trunking through Huntingdon is beneficial. Delays on the A14 north of Trinity Foot will be resolved, along with the long delays in both directions on the Cambridge Northern Bypass. However, the four-minute delay southbound, approaching Girton, will remain.	The scheme generates significant journey-time savings, provides a direct strategic route between Cambridge and the west of Huntingdon and the route adequately addresses congestion issues. Local and strategic traffic will continue to mix on widened sections from Trinity Foot to Girton and some strategic traffic will continue to use the A14 through Huntingdon. Most delays on the A14 north of Trinity Foot will be removed, but retaining the route past Huntingdon for strategic traffic will mean that delays between Godmanchester and Spittals are reduced rather than removed.	The scheme generates significant journey-time savings, provides a direct strategic route between Cambridge and the west of Huntingdon and the route adequately addresses congestion issues. Local and strategic traffic will be separated between Girton and Trinity Foot, providing benefits in terms of safety, congestion and delay. The pattern of delays expected in option 5 is broadly similar to that in option 4. However, the introduction of local access roads will bring benefits in terms of markedly reduced delays east / southbound between Trinity Foot and Girton on the main carriageway.	The scheme generates significant journey-time savings, provides a direct strategic route between Cambridge and the west of Huntingdon and the route adequately addresses congestion issues. Option 6 will perform best in reducing or removing delays of a minute or more from the network, including on the A14 main carriageway and A428 (expected increases in morning peak traffic on the A428 west of the A1198 are small). As with the other highway options that include removal of the Huntingdon Railway bridge, there will be an increase in delay southbound on the A1 approaching Brampton Hut (of nearly three minutes).
Journey-time reduction (Ellington to Milton 2031)[1]	Eastbound: 8min Westbound: 4min	Eastbound: 11½ min Westbound: 12 min	Eastbound: 17½ min Westbound: 14 min	Eastbound: 17½ min Westbound: 14 min	Eastbound: 19min Westbound: 14 min	Eastbound: 18 min Westbound: 13 min

[1] Table 12, A14 Study Output 3: Package Testing and Appraisal Report – November 2012

	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6
Annual journey-time savings (2031)[2]	1.04 million vehicle hours	1.7 million vehicle hours	2.26 million vehicle hours	2.78 million vehicle hours	2.98 million vehicle hours	2.02 million vehicle hours
Benefit to cost ratio (BCR)[3]	1.94 to 2.10	1.80	2.15	3.20 to 3.36	3.49 to 3.66	1.66
Road safety benefits	1 per cent reduction in accidents in study area (no change in fatal accidents). No change in accidents in A14 corridor.	2 per cent reduction in accidents in study area (3 per cent reduction in fatal accidents). 1 per cent reduction in accidents in A14 corridor.	3 per cent reduction in accidents in study area (3 per cent reduction in fatal accidents). No change in accidents in A14 corridor.	2 per cent reduction in accidents in study area (2 per cent reduction in fatal accidents). 6 per cent increase in accidents in A14 corridor.	2 per cent reduction in accidents in study area (3 per cent reduction in fatal accidents). 9 per cent reduction in accidents in A14 corridor.	2 per cent reduction in accidents in study area (3 per cent reduction in fatal accidents). 4 per cent reduction in accidents in A14 corridor.
Community impacts	Commuters and other users will benefit from the capacity enhancements and improved journey-time reliability around Cambridge, though no benefits on the A14 west of Trinity Foot. Improved standards will reduce driver stress. Access to services will be improved over the length of the scheme. Neutral impact on severance as potential issues could be mitigated.	Commuters and other users will benefit from capacity enhancements and improved journey-time reliability between Ellington and Cambridge Northern Bypass. Driver frustration, stress and fear of accidents will reduce. Removal of at-grade junctions and crossings will reduce users' perceptions of risk and security, while the increased highway capacity improves access to services. A neutral impact on severance as option 1. Huntingdon Southern Bypass provides drivers with better views from the road. De-trunked stretch of A14 provides better amenity for non-motorised road users.	Commuters and other users will benefit from the capacity enhancements and improved journey-time reliability between Ellington and Cambridge Northern Bypass. Driver frustration, stress and fear of accidents will reduce. Removal of at-grade junctions and crossings will reduce users' perceptions of risk and security, while the increased highway capacity improves access to services. A neutral impact on severance, as option 1, although removing the Huntingdon railway bridge improves local access in the town. Huntingdon Southern Bypass provides drivers with better views from the road and de-trunked stretch of A14 provides better amenity for non-motorised road users.	Commuters and other users will benefit from the capacity enhancements and improved journey-time reliability between Ellington and Cambridge Northern Bypass. Driver frustration, stress and fear of accidents will reduce. Removal of at-grade junctions and crossings will reduce users' perceptions of risk and security, while the increased highway capacity improves access to services. A neutral impact on severance, as option 1. Huntingdon Southern Bypass provides drivers with better views from the road.	Commuters and other users will benefit from the capacity enhancements and improved journey-time reliability between Ellington and Cambridge Northern Bypass. Driver frustration, stress and fear of accidents will reduce. Removal of at-grade junctions and crossings will reduce users' perceptions of risk and security, while the increased highway capacity improves access to services. A neutral impact on severance as option 1. Huntingdon Southern Bypass provides drivers with better views from the road. New local road network provides better amenity for non-motorised road users.	Commuters and other users will benefit from the capacity enhancements and improved journey-time reliability between Ellington and Cambridge Northern Bypass. Driver frustration, stress and fear of accidents will reduce. Removal of at-grade junctions and crossings will reduce users' perceptions of risk and security, while the increased highway capacity improves access to services. A neutral impact on severance, as option 1. Huntingdon Southern Bypass provides drivers with better views from the road. De-trunked stretch of A14 provides better amenity for non-motorised road users.

[2] Table 14, A14 Study Output 3: Package Testing and Appraisal Report – November 2012
[3] Table 32, A14 Study Output 3: Package Testing and Appraisal Report, November 2012

	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6
Environmental impacts[4]	Slightly adverse effect on landscape due to open, low-lying topography west of Girton. Neutral effect on townscape and a moderately adverse effect on heritage due to known presence of buried archaeological remains. Neutral effect on bio-diversity (no impacts on designated sites) and a slightly beneficial effect on the water environment	Large adverse effect on landscape resulting from construction of Huntingdon Southern Bypass and its impact on Ouse Valley landscape character. Slightly beneficial effect on townscape in Huntingdon from removal of the railway bridge; moderately adverse impact on heritage through visual intrusion at Offord Cluny conservation area and potential impact on buried archaeological remains. Slightly beneficial to Fenstanton Conservation Area. Moderately adverse impact on biodiversity, resulting from loss of habitat along Huntingdon Southern Bypass. Neutral effect on water environment.	Large adverse effect on landscape resulting from construction of Huntingdon Southern Bypass (as option 2). Slightly beneficial effect on townscape in Huntingdon due to removal of the railway bridge and trunk road traffic. Moderate adverse impact on heritage (Option 2), although some benefits to Huntingdon Station, former Huntingdon County Hospital and the Scheduled Monument earthworks on Mill Common. Moderately adverse impact on biodiversity resulting from loss of habitat along Huntingdon Southern Bypass. Neutral effect on water environment.	Large adverse effect on landscape resulting from construction of Huntingdon Southern Bypass (as option 2). Neutral effect on townscape as route through Huntingdon is retained. Moderately adverse effect on heritage (as option 2). Moderately adverse impact on biodiversity resulting from loss of habitat along Huntingdon Southern Bypass. Neutral effect on water environment.	Large adverse effect on landscape resulting from construction of Huntingdon Southern Bypass (as option 2). Neutral effect on townscape as route through Huntingdon is retained. Moderately adverse effect on heritage (as option 2). Moderately adverse impact on biodiversity resulting from loss of habitat along Huntingdon Southern Bypass. Neutral effect on water environment.	Large adverse effect on landscape resulting from construction of western part of Huntingdon Southern Bypass, impacting on the Ouse Valley landscape and the settlements of Offord Cluny, Buckden and Brampton. There are three Registered Parks and Gardens in the A428 corridor that will be affected. Overall, a moderately adverse effect on the townscape in Papworth Everard, but beneficial effects in Huntingdon. Moderately adverse effect on heritage along route of Huntingdon Southern Bypass, but with slight benefits to heritage in Huntingdon. Two Scheduled Monuments near A1198 and impacts on Madingly historic mansion. Moderately adverse effect on biodiversity as A428/ A1198 is within 1km of three ancient woodland (SSSI) sites. Neutral impact on water environment.
Estimated cost of scheme (Q4 2019 prices)[5]	£687m	£1,399m	£687m	£1,522m	£1,224m	£1,589m

[4] A14 Study Output 3: Package Testing and Appraisal Report - Appendices
[5] Table 26, A14 Study Output 3: Package Testing and Appraisal, November 2012

Abbreviations used in table:

BCR = Benefit to cost ratio (present value of benefits divided by present value of costs)

D2AP = Dual-carriageway all-purpose road with two lanes and hard-strip in each direction

D3AP = Dual-carriageway all-purpose road with three lanes and hard-strip in each direction

D4AP = Dual-carriageway all-purpose road with four lanes and hard-strip in each direction

SSSI = Site of Special Scientific Interest

3.4 Key characteristics of route options

The A14 Study Output 3 Report made five key finding, as follows:

1) Option 1, comprising smaller-scale improvements, had limited impacts, both positive and negative, which:
   - resulted in the lowest increases in harmful emissions
   - had the smallest noise and local environmental impacts
   - was considerably less expensive
   - delivered a good BCR at around 2.0
   - did not resolve many of the congestion issues and did little to reduce accidents
   - produced significantly lower journey-time savings
   - did not lend itself to tolling

2) Enhancing the existing A14 was considered better than enhancing the A428 corridor (option 6) because the A14 improvement with Huntingdon Bypass:
   - created 50 per cent more journey-time savings
   - resulted in lower emission, noise and environmental impacts
   - resulted in lower capital costs and higher BCR

But the A428 offered more network-wide benefits within the study area.

3) Local access roads were found to perform better than widening the A14 to accommodate all traffic, as they:
   - offered greater operational flexibility and resilience
   - minimised increases in harmful emissions
   - reduced delays between Trinity Foot and Girton
   - enabled tolling to be introduced more easily on the strategic route
   - required a more complex junction at Girton
   - drew more traffic into the A14 corridor

4) Removal of the A14 road-bridge over the East Coast Mainline railway was found to have benefits and disadvantages including;
   - the removal of strategic traffic from Huntingdon
   - a contribution to a wider reduction in traffic noise
   - benefits to the townscape and community in Huntingdon
   - reduction in mono-nitrogen oxide (NOx) emissions in the Huntingdon air quality management area
   - protection of tolling revenues on the Huntingdon Southern Bypass
   - marginal time savings compared with 'do-minimum' for north-south trips
   - journey-time savings that were 20 per cent lower than if the bridge was retained
   - increased scheme costs and reduction of BCR of scheme options

5) A strong case exists for enhancing Cambridge Northern Bypass, which will result in:
   - journey-time savings being one-third higher
   - peak-hour journey time from Girton to Milton being reduced by six minutes
   - slightly higher accident benefits
   - reduced NOx emissions in central Cambridge
   - 30 per cent more monetised benefits for nine per cent more cost (£91m at 2011 prices)

The study concluded that the best performing highway options were those that were larger, and so offered a wider range of solutions; including a full Huntingdon Southern Bypass, local access roads between the Huntingdon Southern Bypass and Girton and the enhancement of Cambridge Northern Bypass. A decision on whether or not to downgrade the existing A14 route through Huntingdon, and to remove the A14 bridge across the East Coast Mainline, was more finely balanced, with quantitative considerations tending towards the bridge's retention and qualitative considerations tending towards its demolition.

3.5 Effects of tolling

The final stage in the A14 Study was to consider the effects of tolling on the performance of the scheme options and to develop a recommended solution that was capable of being tolled over some part of its length.

The optimal tolled solution is one that has the potential to deliver the most benefits to road users, offers a free local alternative route, and minimises unwanted diversionary effects resulting from the toll.

These aims led to the development of a seventh scheme option, which was created as a hybrid of options 3 and 5. This option built upon the key characteristics identified by the study as contributing to the most successful end-to-end solution and included:

- a dual-carriageway bypass to the south of Huntingdon, from Brampton Hut to Trinity Foot
- on-line widening of the existing A14 from Fen Drayton to Girton
- local access roads from Fen Drayton to Girton
- realignment of the Girton interchange to provide improved free-flow movements
- enhancement of the Cambridge Northern Bypass from Milton to Girton
- de-trunking of the existing A14 through Huntingdon and removal of the railway bridge
- a replacement local road network in Huntingdon to retain local access

It was proposed in the study that the scheme should be tolled from the A1 junction at Brampton to the A14/M11 junction at Girton. (Note that this is not the same as the current tolling proposal, which is described elsewhere.) The study concluded that a tolling regime could be designed that delivers significant economic benefits and generates revenue from tolling, based on a notional toll charge of £1 for cars and £2 for HGVs (at 2011 prices).

3.6 Developing the best option

In 2012, the Highways Agency became responsible for the further development of the A14 Cambridge to Huntingdon improvement scheme. The Agency was tasked with the preparation of a scheme proposal that built on the outputs of the DfT study and met the DfT's strategic objectives for the A14 corridor between Cambridge and Huntingdon. It was also asked to review and develop the way in which tolling could be applied to the scheme.

Over the last year, the Highways Agency has looked into the traffic problems across the key elements of the scheme in more detail and has developed a range of options for tackling traffic in each one. Each option has been assessed against a range of criteria (including traffic flow, safety, environmental considerations and cost) and the most effective solution was then taken forward to form a component of the proposed scheme. This work is presented on the following pages.

Proposed scheme

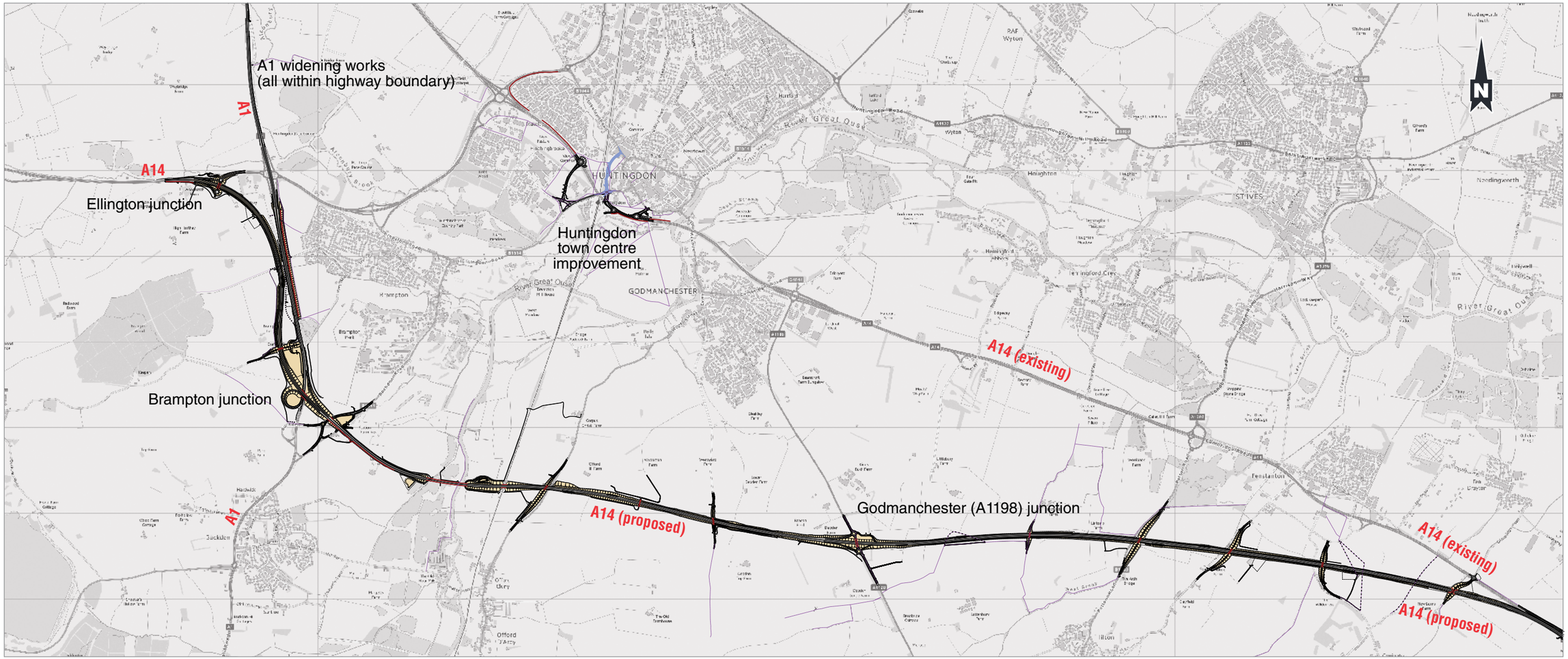


Figure 22

Proposed scheme

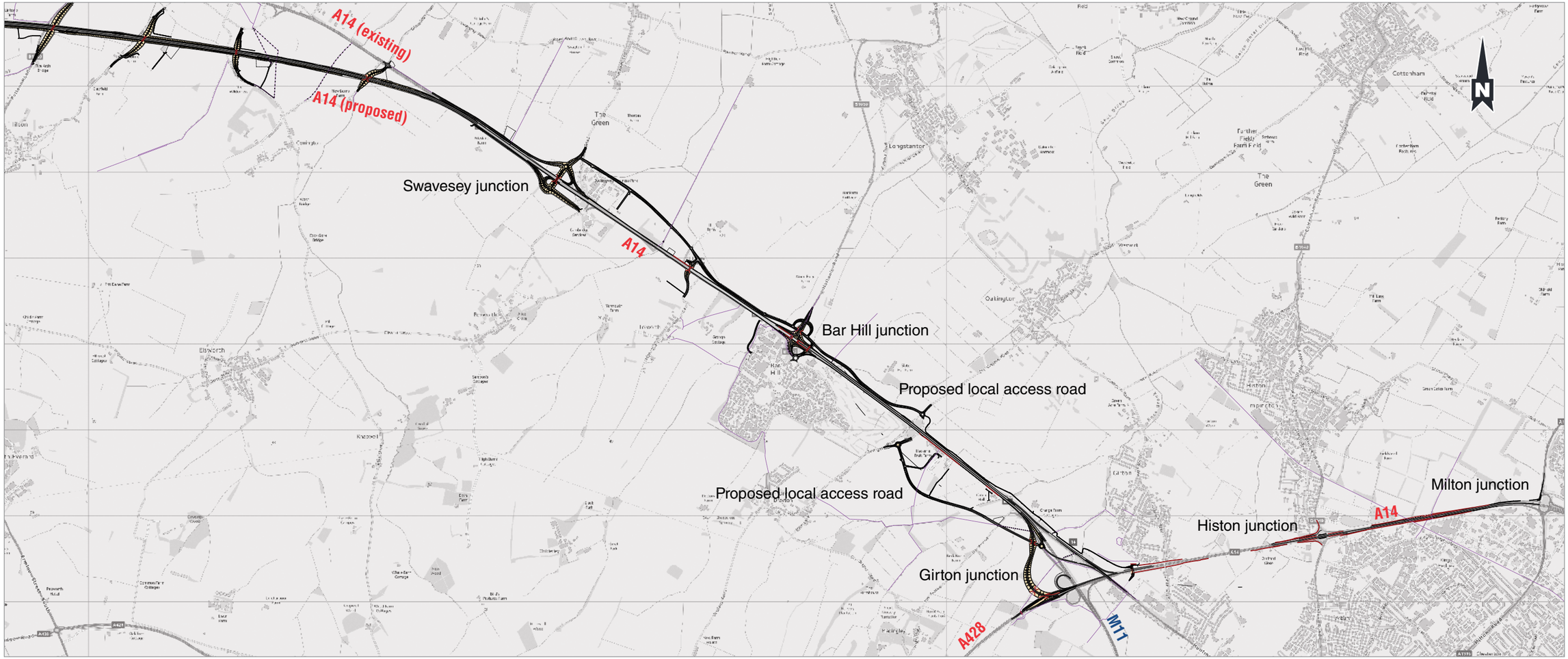


Figure 22

The scheme proposal was developed by considering four discrete scheme elements, as illustrated in Figure 17, these being:

Element 1

The Huntingdon Southern Bypass solution, which comprises:

- a new dual two lane all-purpose road between Ellington and a new junction with the A1 at Brampton
- a new dual three lane all-purpose road between the A1 at Brampton and a new junction with the existing A14 at Swavesey
- junction with A14 at Ellington
- junction with A1 at Brampton
- junction with A1198 near Godmanchester
- tie-in to existing A14 (no junction) near Fen Drayton
- associated de-trunking and re-alignment of the A14 through Huntingdon
- widening the A1 to dual three-lane, all-purpose road between Brampton and Alconbury

Element 2

The A14 on-line improvement solution, which comprises:

- widening of the existing A14 to dual three-lane, all-purpose road between Swavesey and Bar Hill
- widening of the A14 to dual four-lane, all-purpose road between Bar Hill and Girton
- improvement of junctions at Swavesey and Bar Hill
- closure of the access to the A14 at Dry Drayton
- provision of a two-lane single carriageway local road between Fen Drayton and Dry Drayton

Element 3

The Girton interchange solution, which comprises:

- junction realignment to improve free-flow connectivity of the A14, the M11 and the A428
- local improvement of A1307 Huntingdon Road
- provision of two-lane road between Dry Drayton and Girton, connecting to Huntingdon Road, Cambridge

Element 4

The Cambridge Northern Bypass solution, which comprises:

- widening of the A14 to dual three-lane, all-purpose road from Histon to Milton junctions
- improvements to Histon and Milton slip roads
- widening of the eastern Milton junction carriageway to three lanes
- tie-ins to separate Highways Agency local improvement scheme

Each of the elements is described in more detail on the following pages.

3.7 Element 1: Huntingdon Southern Bypass and A1 widening

Huntingdon Southern Bypass – proposed solution

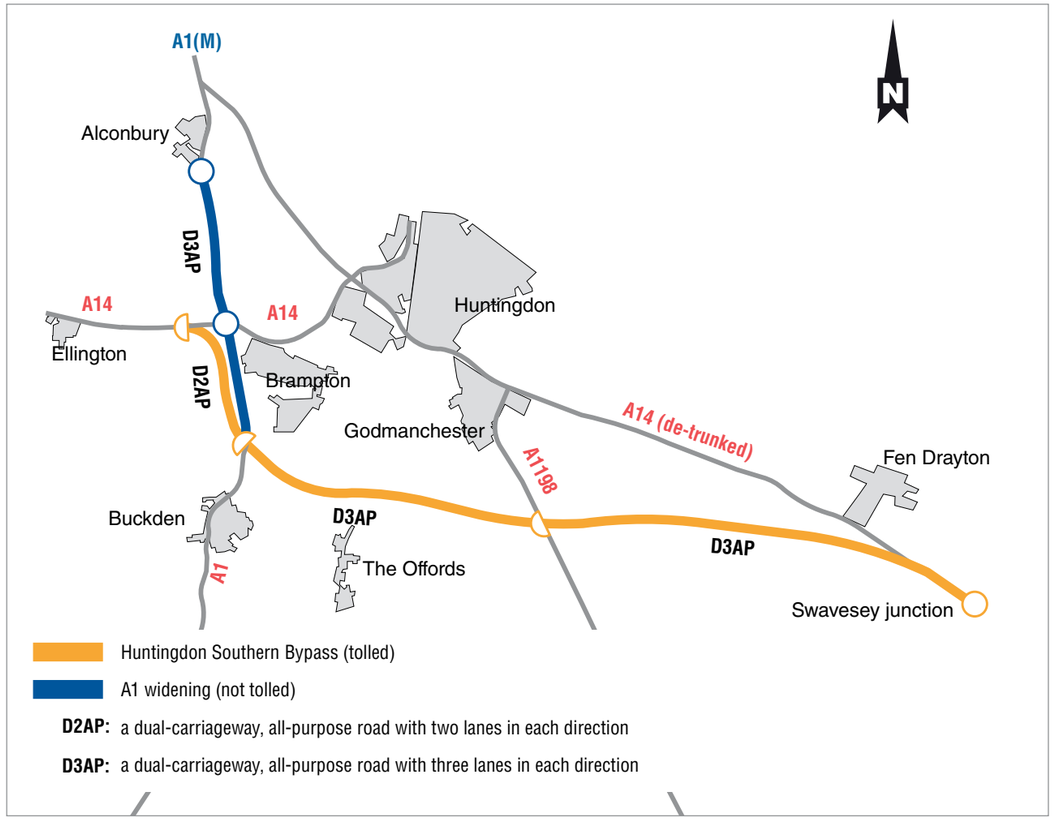


Figure 23

Huntingdon Southern Bypass – alternative solution

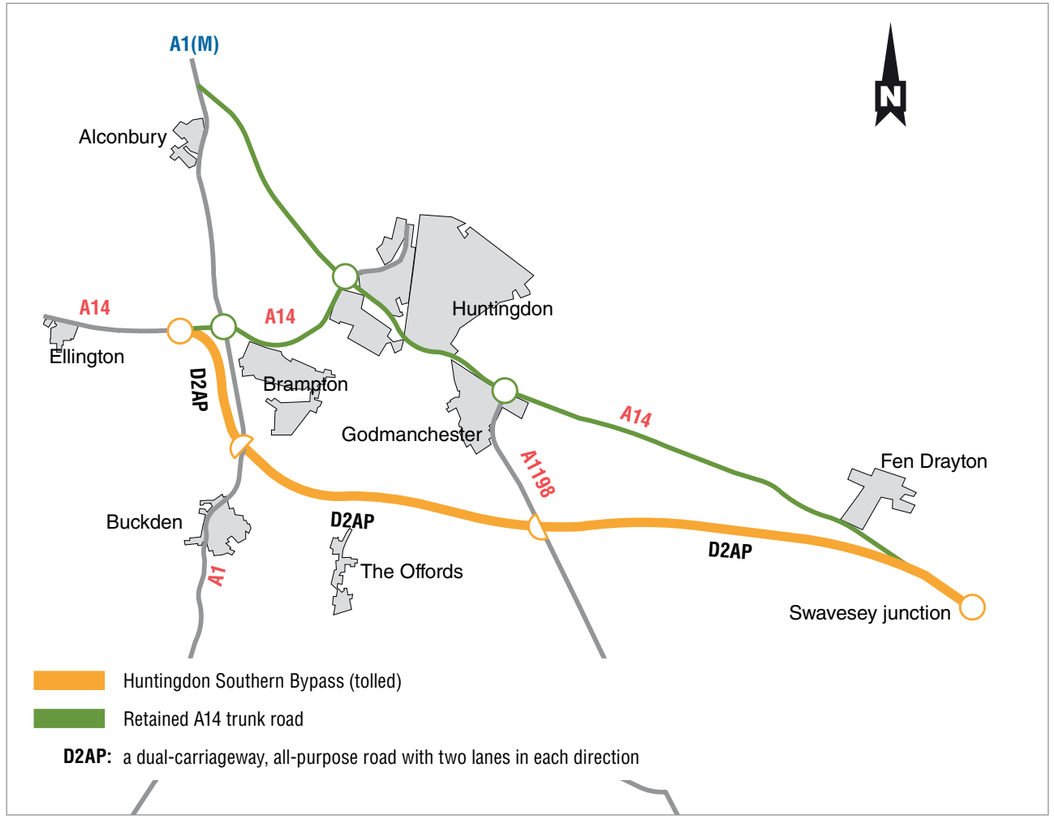


Figure 24

Key points

The solution for the Huntingdon Southern Bypass and the A1 improvement has the following features:

- it delivers the strategic transport objectives and forms a high performing, east-west road corridor, ensuring long-distance traffic uses the A14 rather than local routes
- it generates higher tolling income as there is more traffic using the tolled A14, and greater contribution to the affordability of the scheme
- it addresses the local authority aspiration to promote regeneration (delivery of the Huntingdon West Area Action Plan) and quality-of-life enhancements (noise, air quality and severance benefits) in Huntingdon by de-trunking and realigning the existing A14
- it provides a three-lane bypass, which offers better resilience against breakdowns and accidents than could be achieved through two lanes
- it has a lower overall whole-life cost compared with the alternative option
- it has a lower benefit cost ratio (BCR) than the alternative option, but BCR is at an acceptable level

Huntingdon Southern Bypass

The Huntingdon Southern Bypass (Figure 3) will provide a high-standard strategic link for through-traffic moving in an east-west direction between Cambridge and Huntingdon. It will also link the M11 and A1 (M) motorways to improve north-south connectivity for through-traffic. It is suitable for tolling as it has relatively few junctions and the scope for diversion on through-routes is limited.

The Huntingdon Southern Bypass will be constructed to dual two-lane, all-purpose (D2AP) highway standards from Ellington to Brampton and, thereafter to dual three-lane, all-purpose (D3AP) standards from Brampton to Swavesey and its junction with the existing A14. The route will pass to the south of Huntington and will include junctions with the A1 at Brampton and the A1198 to the south of Godmanchester.

The provision of a bypass to dual, three-lane, all-purpose (D3AP) standards has a number of advantages. First, it provides resilience against vehicle breakdowns and accidents, and makes routine roadworks easier, safer and less disruptive to carry out. Second, it provides sufficient capacity to accommodate all traffic movements and allows the existing A14 through Huntingdon to be de-trunked.

Alternative route

A two-lane, dual-carriageway bypass (Figure 14) would not deliver the resilience provided by the three-lane carriageway, while causing almost the same level of negative environmental impacts along the bypass corridor. In addition, it would require the existing A14 through Huntingdon to be retained as a secondary through-route, which would eliminate many of the environmental and townscape opportunities made possible by de-trunking. In particular, it would retain a bridge over the railway line that is visually intrusive, has height restrictions and is in poor condition.

De-trunking the A14 through Huntingdon also addresses the Department for Transport's ambition to place the right vehicles on the right roads and the local authority's ambition to promote regeneration and quality-of-life improvements in the areas of Huntingdon currently affected by traffic on the A14 route. De-trunking works will include link roads to connect the severed A14 on either side of the East Coast Mainline via a short section of Brampton Road.

Tolls are proposed on this element of the route.

A1 widening

Analysis of the original six route options in the Department for Transport's A14 Study recognised, but did not address, the problem of additional traffic delays on the A1 trunk road, caused by the downgrading of the existing A14 route through Huntingdon and the diversion of through-traffic onto the Huntingdon Southern Bypass. This was shown to result in additional delays of more than three minutes around Brampton Hut.

The A1 widening solution addresses this issue by providing additional lane capacity on the A1 between the proposed new junction with the A14 at Brampton and the existing junction at Brampton Hut. The current highway is built to dual, two-lane, all-purpose standards, but the intention is to widen to dual, three-lane, all-purpose road (D3AP) over this length. Widening works can be carried out within existing highway boundaries and hence this improvement has relatively little impact on the surrounding area.

Further review of the scheme resulted in a decision to extend the widening of the A1 north of the Brampton Hut junction as far as Alconbury, where the road already becomes dual, three-lane carriageway. This provides a harmonisation of cross-sectional standards over this length and addresses a predicted congestion issue, which is expected to occur several years after scheme opening; hence future-proofing this element of the scheme against traffic growth and accommodating the additional traffic that will be generated by the proposed housing development at Alconbury Weald.

No tolls will be charged to motorists on the A1.

3.8 Element 2: A14 Fen Drayton to Girton on-line improvement

A14 on-line improvement solution

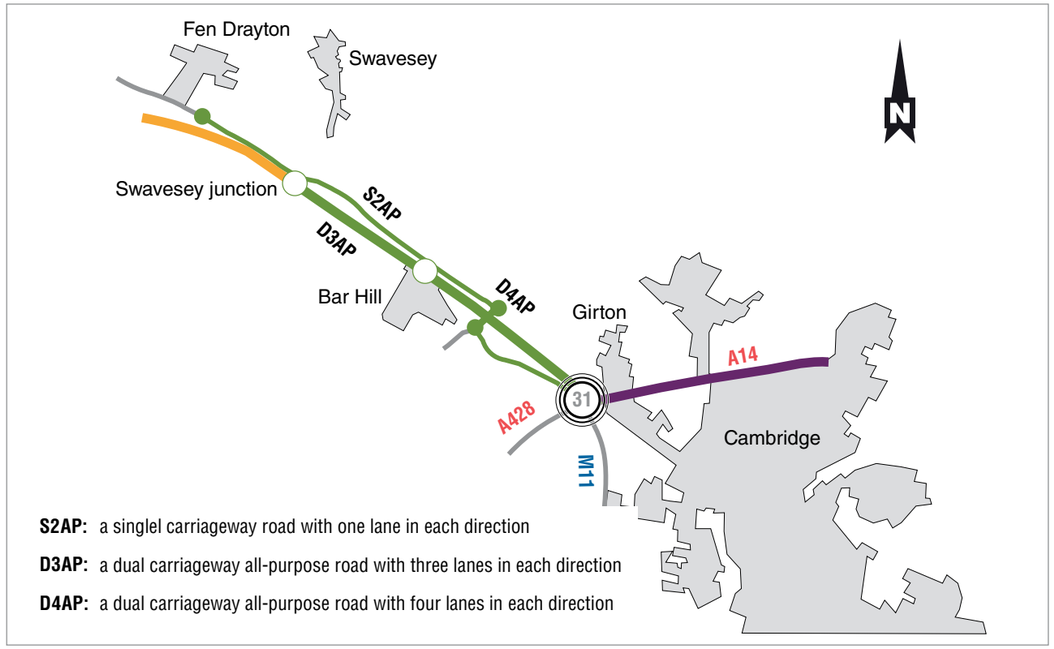


Figure 25

The solution proposed in this section is to widen the existing A14 to provide additional capacity for strategic (and some commuter) traffic, while providing single-carriageway standard local access roads to carry local traffic and to give access to adjacent properties. This improves safety, reliability and convenience on both strategic and local roads by eliminating direct accesses onto the former.

Two junctions will be provided over this length. The first, at Swavesey, will provide access for local traffic to Huntingdon, Godmanchester and St Ives via the de-trunked A14 route and other local roads. It will also maintain good access to the Cambridge service area adjacent to the A14 at this point.

The second, at Bar Hill, will become a large gyratory junction that connects the Bar Hill settlement with both the local road and strategic road network, as well as providing for the future growth in traffic resulting from the large-scale housing development planned at the Northstowe site.

The local road network will provide safer access for pedestrians, cyclists and horse riders; the scheme includes a new bridleway bridge at Bar Hill, which further supports this strategy. The strategic route will be constructed to dual, three-lane standards from Fen Drayton to Bar Hill, where, by means of a lane-gain through the junction, it will become a dual, four-lane carriageway as far as Girton junction. This is to accommodate the increased traffic volumes and weaving movements over this length.

In the alternstive scheme, it had been proposed that the tolled section of road would extend from Girton westwards to Ellington. In these circumstances, it would have been necessary to create a new interchange at Fen Drayton with west-facing links onto the existing A14 towards Huntingdon, and to construct a dual two-lane, all-purpose local road running in parallel to the new trunk road from Girton to Fen Drayton. This option was rejected because it was too expensive and because the more extensive tolling scheme would force local traffic onto a parallel, free route, which would then need to be constructed to provide a higher capacity.

3.9 Element 3: Girton interchange

Girton solution

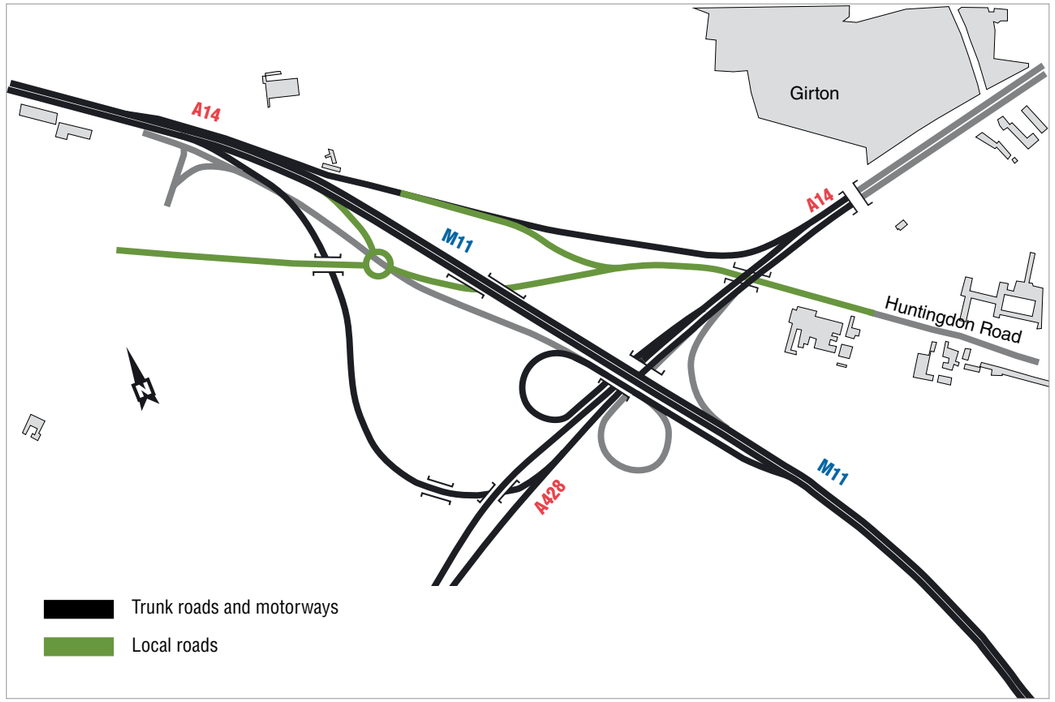


Figure 26

Girton junction is a complex and heavily-trafficked intersection between a motorway, two A-roads, and an arterial route into Cambridge. Over a dozen alternative schemes were considered for improving this junction, aiming to maximise 'free-flow' connectivity between each of the roads, while addressing issues of affordability, safety, environmental impact, and traffic demand in the chosen solution. The original pre-2010 scheme called for a more complicated, more intrusive solution that offered few additional benefits compared with the scheme now proposed.

The solution developed maintains all the principal traffic movements through the junction and, in particular, improves traffic flows from east to west on the A14. It accommodates the planned widening of the Cambridge Northern Bypass between Girton and Histon junctions, which is being carried out by the Highways Agency in 2014, to be completed before the A14 Cambridge to Huntingdon scheme begins. It also improves merges between major roads to reduce queuing and delays and to improve safety.

The solution accommodates growth associated with the planned North West Cambridge developments and the proposed Northstowe housing development. Local traffic into, and out of, Cambridge will continue to use Huntingdon Road, which will connect to the new local access road and westwards to Bar Hill.

3.10 Element 4: Cambridge Northern Bypass

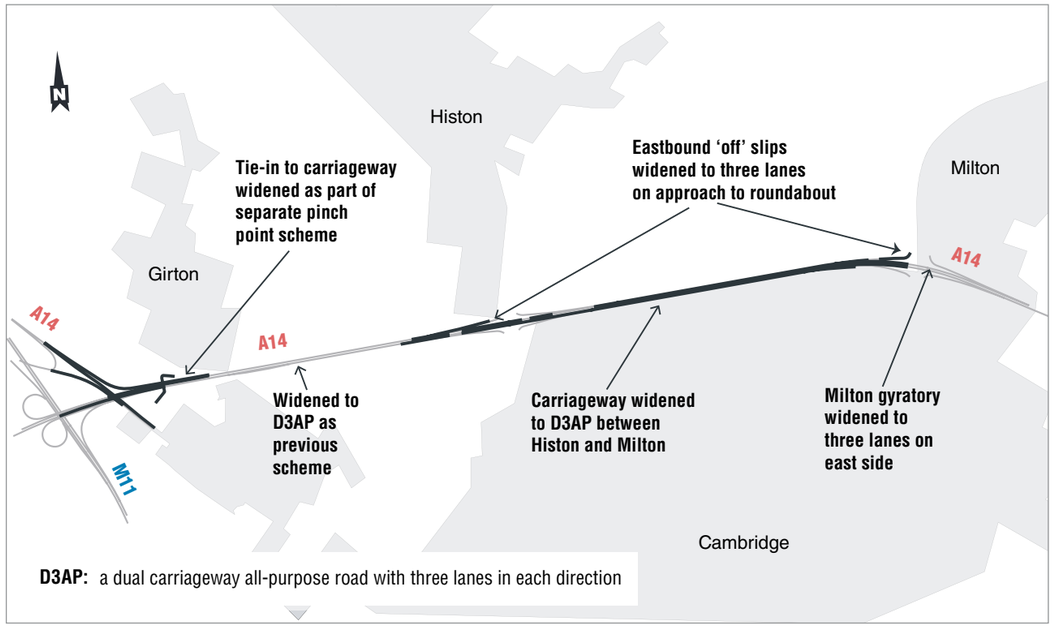

N
Histon
Milton
Girton
Cambridge
A14
A14
A14
M11
Tie-in to carriageway widened as part of separate pinch point scheme
Eastbound 'off' slips widened to three lanes on approach to roundabout
Widened to D3AP as previous scheme
Carriageway widened to D3AP between Histon and Milton
Milton gyratory widened to three lanes on east side
D3AP: a dual carriageway all-purpose road with three lanes in each direction

Figure 27

The A14 Cambridge Northern Bypass serves a dual purpose, carrying both strategic traffic and local commuter traffic into, and out of, Cambridge. The objective of this solution, therefore, is to eliminate the congestion and delay to through-traffic caused by local queuing at Milton and Histon junctions and to make it easier for commuters and other local users to leave the road at these locations.

From Girton to Milton, the Cambridge Northern Bypass will be widened to a dual, three-lane carriageway in each direction. The first part, from Girton to Histon, is being carried out early by the Highways Agency as an approved scheme during 2014. This will provide an additional lane between the existing slip roads at Girton and Histon on both carriageways to help alleviate existing congestion as soon as possible.

An extra lane will then be added to the main line through the Histon junction and between Histon and Milton. Some additional capacity will also be added to the roundabouts at these junctions and more lanes will be built at the top of the slip roads to reduce existing queuing. All the widening of the Cambridge Northern Bypass will take place within the existing highway boundary. No additional land will be required.

Consideration will be given to schemes for improving the A14 to the east of Milton junction as part of the Highways Agency's ongoing A14 route-based strategy study. But the works associated with Milton junction will form the most easterly point of the A14 Cambridge to Huntingdon improvement scheme.

Enhancements to the Cambridge Northern Bypass will help to regulate traffic flow and eliminate existing congestion, making the road safer. Journey planning will be more reliable and predictable. These improvements will also serve the rapidly expanding residential and commercial development in the northern fringe of the city, helping to preserve the reputation that Cambridge has for innovation and growth.

Section 4:
The route ahead

4.1 Development Consent Order process

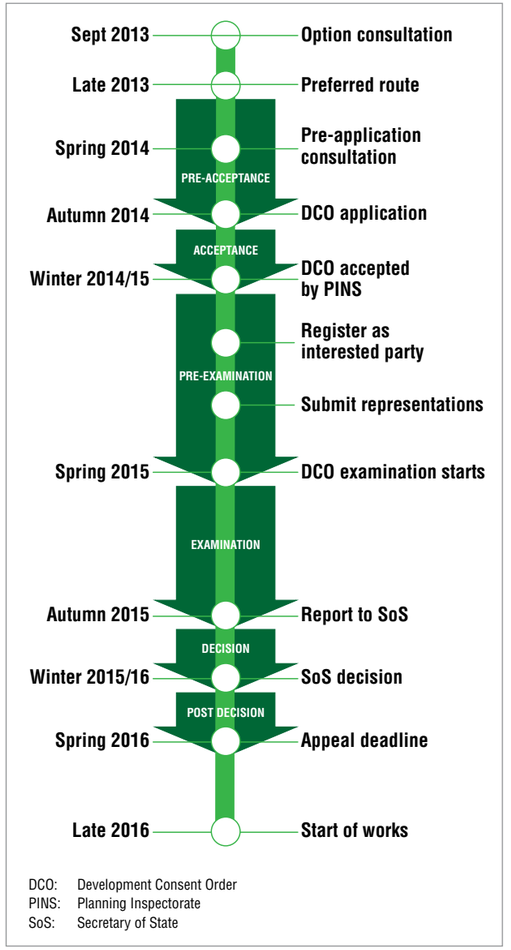


Figure 28

Note: More information about the Planning Inspectorate, the *Planning Act (2008)* and the Development Consent Order (DCO) process can be found on the Planning Inspectorate's National Infrastructure Planning website:

http://infrastructure.independent.gov.uk/

Overview of the process

The A14 Cambridge to Huntingdon improvement scheme has been identified as a Nationally Significant Infrastructure Project (NSIP) as defined by the *Planning Act (2008)* and will therefore be constructed under the enabling powers provided by this Act of Parliament. In the past, most highway projects were constructed under the powers of the *Highways Act (1980)*, but for schemes of this size and significance, the *Planning Act (2008)* now provides a better and more relevant delivery route.

The *Planning Act (2008)* requires the Highways Agency to submit a DCO application to the Planning Inspectorate, setting out its proposals for the scheme and its associated enabling works.

Pre-application

The formal process starts when the Highways Agency notifies the Planning Inspectorate of its intention to submit an application for development consent. This begins the pre-application stage.

During the pre-application stage, the Highways Agency consults extensively with both statutory and non-statutory stakeholders and with the local community. More information is provided on consultation in the next section.
Once the consultation period has concluded and relevant representations have been considered, the Highways Agency will prepare a consultation report, which will set out how consultation was conducted and how representations have been responded to in the scheme. This will be submitted to the Planning Inspectorate as part of the application for DCO approval.

Acceptance

Once a formal application is submitted, the Planning Inspectorate will have 28 days to evaluate the application and to decide whether or not it meets the standards required for examination.

Pre-examination

A pre-examination stage provides stakeholders with a month to register their 'relevant representations' relating to the scheme. Representations can support, oppose, or simply comment on, aspects of the scheme. The Planning Inspectorate will publish all representations on the National Infrastructure Planning Portal.

After the close of the registration period, the examining authority (the Planning Inspectorate) generally takes up to three weeks to review the application and all relevant representations, and to identify the principal issues that need to be considered during examination.

The pre-examination phase typically takes around three months and will finish with a preliminary meeting with the appointed examining authority to decide the way in which the examination will be conducted.

Examination

The Examining Authority will then conduct an examination of the proposals. This is a formal legal process that must be completed during a six-month period. Consideration will be given to all aspects of the proposal and the representations that have been received. At this stage, all interested parties will be invited to provide written representations, and the examining authority will put written questions to the applicant (the Highways Agency) and other interested parties.

The examination is principally a written process, but in certain circumstances the examining authority may call for a public hearing and, if necessary, hearings on specific issues. Information on hearings will be provided by the examining authority in the procedural decision issued to all interested parties following the preliminary meeting.

It is anticipated that the examination process will begin in February / March 2015.

Once the examination process is complete, a report will be prepared with recommendations to the Secretary of State. This will be done within three months of the end of the examination.

The Secretary of State then has a further three months to consider the report and its recommendations and to make a decision on whether, or not, to grant development consent. All interested parties will be notified of the Secretary of State's decision and details will be published on the National Infrastructure Planning Portal.

It is anticipated that the Secretary of State's decision will be announced by February 2016, but timing depends upon the length of the examination stage and the level of stakeholder and community interest in the scheme.

Once a decision has been announced, there is a six-week period during which the decision can be challenged in the High Court. This process is known as judicial review. Subject to there being no judicial review, it is anticipated that the scheme will proceed towards construction by April 2016, with a start of work on site taking place before the end of that year.

Consultation process

Prior to the submission of a DCO application, the developer – in this case, the Highways Agency – must consult widely with the community on its proposals, along with the relevant local authorities, landowners and occupiers, and others with whom it has a statutory requirement to consult.

This process begins with a public consultation to consider route options and tolling proposals. This takes place in September / October 2013. At this consultation, the Highways Agency will present its proposals to the public and obtain feedback on them. It will explain what decisions have been influential in developing these proposals and the key choices that have been made.

This consultation will be used to help refine the proposals in the light of the ideas, comments and opinion received. During this period, stakeholders will have chance to attend exhibitions, review written materials, and speak to Highways Agency representatives about the proposals and the way in which they will affect individuals and communities.

Once all feedback from this first consultation has been considered and the scheme proposals have been reviewed, the Highways Agency will announce a 'preferred route' for the A14 Cambridge to Huntingdon improvement scheme.

This is expected to be published in late 2013. A formal pre-application consultation exercise will then take place in late spring 2014. Prior to the start of this exercise, there will be extensive publicity and the Highways Agency will publish a Statement of Community Consultation to set out how, when and where it intends to consult with the public and the local community.

In addition to community consultation, the Highways Agency will consult with various statutory and non-statutory groups, including local authorities, local businesses and operators, road and freight groups, port operators and other interested parties in order to obtain the widest possible range of opinion on the scheme.

The length of time taken to consult on the scheme in sufficient detail to adequately inform the DCO application is not certain and it depends on the extent of community and stakeholder interest shown. But the pre-application consultation is the best opportunity for those with an interest to influence the scheme proposals, though taking part in the process at this stage does not prejudice any individual or group from objecting to the scheme later on.

It is anticipated that the pre-application consultation will begin in May 2014 and last for around two to three months. Once it is concluded, a consultation report will be prepared and submitted to the Planning Inspectorate as part of the DCO submission.

4.2 Managing the project

The Highways Agency has been appointed by the Department for Transport to take responsibility for the development of the A14 Cambridge to Huntingdon improvement scheme. The Highways Agency has responsibility for operating and improving the trunk-road and motorway network in England.

The Highways Agency provides the core project management resources needed to deliver the A14 project, but works closely with a number of external consultants and advisors, who can provide expertise on matters including legal advice, engineering design and environmental assessment.

During the scheme development stage, which begins following the announcement of a preferred route, the Highways Agency will be appointing consultants to support it through the DCO process.

The scheme will be constructed by contractors, who will be appointed directly by the Highways Agency if approval is granted for the works. Contractors will be invited to tender competitively for the work, with focus being given to the past performance of the contractors in undertaking works of this type, and their ability to provide good value for money.

It is anticipated that two or more contractors will be appointed, due to the size of the scheme.

4.3 Managing scheme impacts

Overview

The construction of the A14 Cambridge to Huntingdon improvement scheme is a large-scale civil engineering exercise, which is likely to be carried out as a number of separate contracts with major engineering contractors. Construction is due to commence – subject to confirmation of the DCO and other related permissions and consents – by the end of 2016, and the scheme will take between three and four years to complete.

The scheme is likely to be constructed in four elements:

- A1 widening between Brampton and Alconbury
- the Huntingdon Southern Bypass
- on-line widening between Fen Drayton and Milton
- works associated with de-trunking and re-aligning the A14 through Huntingdon

The Highways Agency recognises that construction can be disruptive to road users and local residents, and will make every effort to minimise these impacts by carefully planning and phasing the works. Construction of the on-line widening work and side roads will inevitably have

more impact on road users. Where possible, side road and junction construction will be carried out off-line and tied into the existing road network only when complete and serviceable, but at Bar Hill, in particular, construction will be complex.

The proposed scheme will inevitably have both positive and negative impacts on the environment and community within the A14 corridor between Cambridge and Huntingdon; the aim of the Highways Agency is to minimise the adverse effects of the scheme, while capturing the wider opportunities for improvement that it creates.

Huntingdon Southern Bypass

The Huntingdon Southern Bypass to the north of Offord Cluny passes through open, undulating agricultural land, through woodlands and across the floodplain of the River Ouse, and will have a significant adverse effect on the landscape character of this corridor. It also passes close to a number of village communities, which will suffer slight adverse impacts, including an increase in road traffic noise. Earth bunds will be used on either side of the carriageway to create false cuttings, which will screen the road from its surroundings and help to reduce road noise and visual intrusion. Consideration will be given to the rural setting of the bridges across the River Ouse and East Coast Mainline railway line, with both the bridge architecture and the associated landscaping scheme helping to soften the impact of these structures on their surroundings. A similar approach will be taken in relation to the proposed new junction at Brampton. The extent of road lighting needed on this section of road has not yet been determined, but the adverse visual impact of lighting on rural areas is recognised and design proposals will be sensitive to this.

Construction of the bypass will be carefully planned to minimise the impacts on local communities and the environment. Access routes to the site will avoid sensitive areas, and the large-scale, earth-moving operations needed to construct embankments and cuttings will, as far as possible, be constrained within site boundaries. This means identifying adjacent areas of land that can be used to supply earthworks materials to the site. The presence of some archaeological remains along this route is expected; therefore further investigations will need to take place as the design and construction proceeds.

The Highways Agency will encourage contractors to set up freight consolidation centres well away from the A14 corridor to minimise deliveries of construction materials to the site. Wheel-washing facilities will be placed at every egress point to ensure that public roads are kept in good condition, and construction routes will be agreed, in consultation with the community, to keep heavy vehicles away from more sensitive areas.

De-trunking works

The Huntingdon Southern Bypass will have positive impacts on the environment and community along the existing A14 corridor through Huntingdon. The existing dual carriageway passes at high level over the Ouse and the East Coast Mainline railway line, which has noise and air quality impacts on the surrounding area and detracts from the setting of the town centre. The removal of the railway viaduct and its approach embankments, together with the significant reduction in traffic volumes, will have beneficial impacts in Huntingdon and create opportunities for the redevelopment of a number of town centre sites.

Works will only begin once the Huntingdon Southern Bypass is complete and open to traffic. The demolition of the A14 bridge over the East Coast Mainline railway is a complex and specialist project, which will require a number of railway closures over a period of several months. Demolition operations will inevitably create noise and dust, but working-hour controls will be placed on the contractor and detailed method statements will be reviewed in detail before work takes place.

The removal of the adjacent approach embankments will also necessitate a high number of truck movements over a period of time. Again, haul routes will be agreed in advance with the contractor and sensitive areas will be avoided wherever possible.

A1 corridor

The increase in traffic levels on the A1 corridor between Brampton and Alconbury will result in increased noise levels and road-related pollutants. However, widening work will take place within existing highway boundaries and therefore will have limited impacts beyond the road corridor.

During construction, traffic management will be an important consideration, both to help manage congestion during the period of the improvement works and to ensure the safety of motorists and the workforce.

Fen Drayton to Girton (including Girton junction)

Proposals for this section of the route involve widening the existing A14 to create additional traffic lanes, together with the construction of a new local road network alongside the trunk road. This will result in a reduction in severance and improvements in safety for village communities in the vicinity of the A14 corridor and for those individual properties that are currently accessed from the trunk road. However, the predicted increase in trunk-road traffic will lead to increases in road noise and pollutants.

The road passes through relatively flat, or undulating, farmland and a landscaping scheme will be developed to enhance the screening of the road and to soften its impact on the rural setting. A number of new structures will be constructed at Girton to improve the free-flow characteristics of the junction and these will have some adverse impacts in terms of additional carriageway lighting, noise and air quality. However, the scheme will include a range of mitigation measures to reduce these impacts, including noise-fencing and landscape screening. Architectural impacts are slight in this area, although there are two undesignated sites in the vicinity of Girton that may be affected.

During construction, works on the main carriageway will cause some disruption, but careful attention will be paid to the phasing of the scheme to minimise the impacts on overall journey time for those using the trunk road. Construction of the junctions at Girton and Bar Hill, in particular, will be relatively complicated and will be planned in a way that maintains through-movements on both the main carriageway and side roads at each phase of the scheme. Good communication with residents, businesses and road users will be crucial to help minimise disruption and inconvenience. As with the Huntingdon Southern Bypass, careful control of contractor access to the site will help minimise the impacts of construction traffic on the surrounding villages.

The improved road drainage arrangements proposed for this section of the scheme will have a beneficial effect on the water environment adjacent to the road and offer better protection against spillages from road vehicles.

Cambridge Northern Bypass

The improvement of Cambridge Northern Bypass will have a fairly limited impact on the surrounding communities and environment as work will take place within an existing road corridor. Increased traffic volumes and average speeds will have a slightly adverse impact on noise and air quality, but reduction in queuing at junctions will be beneficial.

Again, traffic management through the works will be an important consideration in relation to road-user and workforce safety and in the management of traffic congestion.

4.4 Operating and maintaining the road

The A14 Cambridge to Huntingdon improvement scheme will form part of a strategic trunk road route that extends from the M1/M6 junction near Rugby in the West Midlands, to the town of Felixstowe on the east coast.

The Highways Agency is responsible for operating and maintaining the trunk road and motorway network of England, which it undertakes by means of maintenance and operation contracts with private sector service providers. The A14 will be operated under the Highways Agency's contract for the East of England trunk road and motorway network, which will be responsible for general maintenance and repairs, together with small improvement schemes. The Highways Agency Traffic Officer service also provides routine patrols on the network.

The Highways Agency is developing route-based strategies for its strategic trunk road and motorway corridors. This will help the Agency to provide a smarter and more sustainable approach to investment planning and allows local and regional input to be considered when making strategic decisions about the road network. A route-based strategy is currently being developed for the Midlands to Felixstowe corridor (including the A14 and the A428) and consultation is currently taking place with a range of stakeholders.

The scheme proposals involve the introduction of a free-flow tolling system on the Huntingdon Southern Bypass. The tolling system will be operated and administered by a private-sector service provider contracted by the Highways Agency. It is proposed that the operator will be paid a fee to collect tolls on behalf of the Highways Agency and will operate the software, systems and equipment needed to achieve this. The operator will also be responsible for the back-administrative services needed to manage the payment and enforcement systems.

The scheme will also include construction of new local roads within the A14 corridor and the de-trunking and partial realignment of the existing A14 in the vicinity of Huntingdon. These roads will be operated and maintained by the local authority, Cambridgeshire County Council.

Annex A:

Supporting information

A: Partner organisations

Government has been clear that part of the cost of the scheme must be funded through a local contribution. The following organisations in the east of England have responded magnificently to this challenge and have agreed to make a contribution up to £100m:

Cambridgeshire County Council

Huntingdonshire District Council

South Cambridgeshire District Council

East Cambridgeshire District Council

Fenland District Council

Cambridge City Council

Peterborough City Council

Northamptonshire County Council

Suffolk County Council

Norfolk County Council

Essex County Council

Greater Cambridge Greater Peterborough Enterprise Partnership

South East Midlands Enterprise Partnership

New Anglia Enterprise Partnership

A2: Regional context

The Cambridge sub-region is one of the UK's fastest growing areas. Between now and 2031, the population is expected to grow by 23 per cent. This growth will drive a 28 per cent increase in housing provision and a 22 per cent growth in jobs. More people and more jobs will mean more demand is placed on the transport system.

Although 84 per cent of Cambridgeshire's workers live and work in the county, most jobs are concentrated in Cambridge. With high house prices in, and around, the city, workers are living further away from their place of work and commuting longer distances. The revised local plan for Cambridge, whilst envisaging some housing development within the city and on its urban fringes, acknowledges that there will be more jobs than residents and that there will continue to be strong demand for travel into the city from the rest of the county.

The Joint Development Strategy for Cambridgeshire recognises that existing congestion on the A14 threatens the achievement of this growth. The strategy advocates a change in settlement patterns with the provision of more affordable housing at key locations along the main transport corridors, close to the city. The development of Northstowe, a new settlement of up to 10,000 houses on the former Oakington Barracks site, is a key component of this strategy. Good public transport, in the form of a guided bus, will link Northstowe to Cambridge, but the full development of Northstowe is dependent upon the A14 being improved.

Cambridgeshire County Council and Peterborough City Council are preparing a long-term transport strategy for the county. This will focus on key barriers and capacity constraints on the strategic road network, as well as developing an integrated high-quality passenger transport network of rail, guided bus and bus services that link Cambridge and Peterborough to market towns and district centres. The Peterborough / Huntingdon / St Ives to Cambridge corridor is identified as a main growth corridor, where improving the A14 and continued development of the guided bus-way are seen as both necessary and complementary.

The current Local Transport Plan for Cambridgeshire reports that congestion on the A14 is a constraint on business development and hinders access to labour markets. The Council has lobbied hard for improvements to the trunk road and fully supports the development of this scheme.

A3: Contact details

For further information, please contact the Highways Agency at:

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Manton Industrial Estate
Bedford
MK41 7LW

You can visit our website at:

www.highways.gov.uk/A14CambridgetoHuntingdon

or you can e-mail us at:

A14Cambridgehuntingdon@highways.gsi.gov.uk

If you need help using this or any other Highways Agency information, please call **0300 123 5000*** and we will assist you.

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